Cape Peninsula
University of Technology

PROJECT MANAGEMENT MATURITY ON SUCCESFUL PROJECT EXECUTION IN A MUNICIPALITY IN THE WESTERN CAPE PROVINCE.

By

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DECLARATION

I, Onke Bilikwa, declare that the contents of this dissertation represents my own unaided work, and that the thesis/dissertation has not previously been submitted for academic examination towards any qualification. Furthermore, it represents my own opinions and not necessarily those of the Cape Peninsula University of Technology.

Signed **Date 07/09/2022**

ABSTRACT

Project management has been adopted by businesses in both the public and commercial sectors in an effort to ensure that projects achieve their intended goals. Projects are now increasingly common in the public sector, especially Municipalities, as a way to accomplish developmental objectives and provide services. As a result, businesses have spent a lot of money making sure they have the resources necessary to manage projects well. This investment typically takes the shape of project manager training and development programmes or the adoption and use of project management techniques that have defined procedures for managing projects.

Analysing many facets of an organization's project management performance and exploring the best ways to enhance it to assure project success has been a significant focus of project management research. Project research and project management have advanced, but organisations still struggle with poor project success rates. Project management maturity is an organization's approach to project management and having certain standards and processes in place to manage projects successfully and efficiently. Project management maturity level and its link to project success for the specific organizations are not always known. Hence the objective of the study which was to determine the link between organizations' Project Management Maturity and Project Success as it relates to successful project execution.

The study used mixed methods research methodology because of its ability to provide both depth and breadth to the phenomenon under study, Project practitioners in the municipality who are routinely and directly associated with projects were the study's target population. These comprised project administrators, project team members, project managers and IT Technicians these are all internal stakeholders involved directly with project execution. They all have the lived experiences of failed and successful projects they were involved in and can state or analyse their organization's project maturity levels. The prospective respondents were scattered throughout the municipality and work in environments with other people who are not involved with projects. Consequently, random sampling would include too many other people who are not related to project execution in the system. For this reason. Therefore, the researcher opted for purposive sampling (judgemental sampling) because the individual prospective respondents are distinguishable from the other employees. Respondents who were approached were issued with structured questionnaires with open-ended questions. Respondents were made aware that it is not compulsory to participate, and that respondents could withdraw whenever they felt uncomfortable or could omit any questions, they were not comfortable with. Data Analysis was conducted using SPSS and Excel and thematic analysis to construct illustrations for the comparison of the variables and to give a meaningful answer to the research question.

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ACRONYMS

Acronym/Abbreviation	Description
PM	Project Manager
PMMM	Project Management Maturity Model
PR	Project Review
CSF	Critical Success Factors
PMI	Project Management Institute
OE	Organizational Enables
CMMI	Capacity Maturity Model Integration
OPM3	Organizational Project Management Maturity Model
P3M3	Portfolio, Program and Project Management Maturity Model

CHAPTER ONE:
INTRODUCTION AND BACKGROUND OF THE STUDY

1.1 Introduction

Over the years, we have made significant changes in how we define and quantify project success. The conventional emphasis on the "iron triangle" of time, money, and quality has developed to include other factors, such as the projects' efficacy after implementation (Jugdev & Muller, 2005:19; Williams, 2016: 97) as cited by Isaacs (2018:19).Project management can be characterized as "a basic purpose management technique that can execute projects to effective completion and project stakeholder's satisfaction, despite the conventional challenges of specified scope, intended quality, budgeted expense, and scheduled deadlines (Meredith, Mantel Jnr and Shafer, 2017:13).

Project management therefore refers to the strategies adopted by the organization to realize the core objectives of completion, efficiency, and schedule. Until recently, the concept of "maturity" was rarely used to relate the nature of effectiveness of an organization in carrying out specific goals. In modern times the term has found resonance, especially in finding logical ways to improve the services of an organization (Kerzner, 2017:46).

There has been transformation due to the need to effectively implement organization strategies, and project management maturity has been adopted as the solution to these difficulties (Royce, 2015:37). Maturity is defined in the literature as the state of being mature, fullness or being perfect in terms of development or growth. The purpose of organization is to attain the suitable development of their capacity in handling projects.

Project management maturity is essential for generating the value gained by an organization in implementing project management (Heagney, 2016:9). The methodical application of an enterprise-wide project management system, methodology, policy, and decision-making mechanism is referred to as project management maturity (Fleming & Koppelman, 2016:1). The required maturity level for each organization may differ, depending on its individual targets, objectives, resource capacities, scale, and needs.

A trained project management consulting team determines the right maturity level which an organization should aim at during a thorough investigation. When a corporation has met project criteria and expectations, it is said to have reached full project management maturity (Kerzner, 2019:6). A project management maturity model's goal is to create a baseline of gradual

improvement in project management systems and procedures that can be used to assess an organization's capabilities and chart a path to project success (Lock, 2017:31). An organization's primary goal is to create value for its shareholders, and projects and project management are critical to achieving this goal.

1.2 Background of the Study

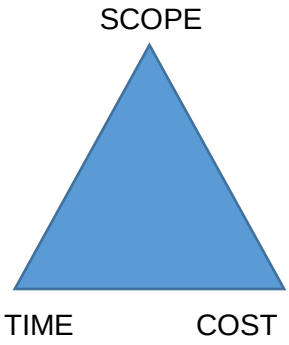
1.2.1 Project management definition

Project management is the application of methods, strategies, expertise, knowledge, and experience a within set guidelines, in order to achieve specific project goals, in accordance with project benchmarks (Fewings & Henjewele, 2017:59). Project management necessitates end results that are constrained by a set timetable and budget. Project management differs from management in that it has a final deliverable date and a time limit, whereas ongoing management does not (Nicholas & Steyn, 2017:67). As a result, a successful project necessitates a diverse set of talents; the majority of which are technological, but also includes people management and commercial awareness. The primary goal of project management is to produce a finished product that will have an influence on the organization in charge of the project (Turner, 2016:41).

Project management provides prediction regarding as many hazards and challenges as possible, and to plan, organize and manage activities so that the project can be finalized successfully, regardless of the specific risks identified (Marchewka, 2016:76). Due to the fact that uncertainties are always present, that implies that events and activities that are vital in completing the project cannot be recognized with precision.

In some projects, the nature of the projects which might be complex, might have adverse impact on the ability of the project to be completed (Heldman, 2018:45). Integration, scope, time, cost, human resource management, risk management, and stakeholder management are all priorities for management and projects. Project management, on the other hand, has a distinct focus that is determined by the project's goals, resources, and timeframe (Binder, 2016:33).

Figure 1.2: The iron triangle



Source: Authors Own Construction

Project management is essential since it highlights the goals and purpose of the organization it forms part of, and the specific strategies that can be adopted to achieve these goals. Project management also clarifies the type of resources that are required and how those resources will be utilized (Papke-Shields and Boyer-Wright, 2017:15). Project management includes identification of objectives, setting specific and achievable goals, managing the conflicting demands from different stakeholders and ensuring that the general goal is attained. It is apparent, in the context of the absence of a systematic and empirical strategy to management practice, that organizations will sometimes find themselves alienated from the concept of organizational growth, and therefore will fail to address the different difficulties posed by the modern era (Martens & Calrvaho, 2017:92). Therefore, the importance of project management to organizations and the subsequent paragraphs provide a clear argument on why project management is essential in an organization. Without a logical strategy to attain the objectives of managing the projects and goals, it would be very complex for organizations to conduct the projects effectively within the time distance and quality challenges; and achieve the desired result. This implies that a specific method and scientific technique should be adopted (Portney, 2017:62).

Project management is therefore concerned with the development of a framework management of project obligations and the implementation of negotiated results (Kivila, Martinsuo, & Vuorinen, 2017:33). Through adopting project management techniques, as defined in the PMBOK and related technical journals, organizations can ensure that they manage the project environment and that project deliverables are handled. There are specific aspects that also determine the success of projects (Muller, 2017:72). These aspects are defined as triple constraints; namely, the demands of time, scope and quality. The absence of project management may lead to uncertainty in terms of attaining organizational goals. A project management strategy is supposed to direct all

facets of a project effectively and efficiently, from the time they commence to the time of finishing it; with the desired aim of completing the product on time and on budget (Layton & Ostermiller, 2017:37).

Project management typically include managing teams within an organization from various functional fields, as well as managing teams and staff from different organizations that are supposed to function collectively for part or all of the length of the project to accomplish the main objective (Radujković & Sjekavica, 2017:56). The thrust of project management is that organization`s resources should be properly managed. Which implies that the organization`s resources should properly handle through planning. These resources that are commonly managed include the personnel, finances, technology.

Organizations cannot always be completely successful in achieving their goals. This implies that project management is the plan adopted by the organization and directs how the organization `s resources and goals will be achieved. Project management is the activity that assist organizations to produce and enforce project plans (Harris, 2017:52). It applies management and interpersonal skills to the process of effectively taking a project, according to specified standards, from start to finalization. Project management maturity is one of the core components of project management. It is a crucial procedure that enables a business to make fundamental and continuous progress while the project is being carried out (Andersen, 2016:43). The purpose of project management maturity is not mainly aimed at quick changes. One the contrary, it is a consistent process whereby, the advantages or progress on the project are monitored (Demirkesen and Ozorhon, 2017:1639-1654).

1.2.2 Concept of Project Success

Critical success factors (CSF) are regarded as essential for achieving project success, and these aspects do not often alter. That being said, project success and project management are different (Gunduz & Yahya, 2018:32). The traditional metric of project management success is project completion within time, money, scope, and quality requirements, and the standard assessment of project success is the attainment of project goals (Williams, 2016:97-112). Project success is measured in terms of project completion.

Project success has shifted from a traditional definition of project completion in terms of time, cost, and scope to a greater emphasis on meeting stakeholder expectations and achieving the organization's core goals (Muller & Turner, 2017:30). To put it another way, project success is defined as providing value to all key stakeholders, including project team leaders, project

managers, and sponsors (Zuo, Zhao, Nguyen, Ma & Gao, 2018:86). Typically, project success is measured in terms of cost, time, and scope. Cost and schedule control determines a project's productivity and contributes to effective management (Mir & Pinnington, 2014:4). Timing performance is essential in terms of project success.

Project success is a complex, uncertain factor that changes throughout a project's life cycle. In the course of the project execution phase, expenses, time, and scale are critical success elements (Burke, 2013.47). However, after the project is completed and the result is delivered to the stakeholders, these success factors lose their value, as then other aspects become essential. Generally, project performance should be evaluated by taking into account diverse areas such as; the cost and time goals of the project, the achievement of strategic enterprise objectives, and the financial objectives of the enterprise (Anantatmula & Rad, 2018:165-178). From a different perspective, success variables can be separated into four categories: project factors, project managers and team members, the external environment, and organizational factors (Mathar, Assaf, Hassanain, Abdallah and Sayed, 2020:35).

Project success as a process, cannot be successfully executed without project management maturity, which is a radical strategy which comprises the development, methodology, techniques and making of decisions. There are specific factors that have an impact on project management maturity; which also includes the goals of the organization; meaning the approaches adopted, the capabilities of the resources, the scale of the projects and the organizational needs (Samset & Volden, 2016:297-313).

1.2.3 Conceptualization of Project Management Maturity

Project management maturity is essential for ensuring that an organization is able to generate novel ideas and initiatives that will lead to project success (Gorog, 2016:44). It allows the organization to properly manage its project, which ultimately leads to project success. The assumption in implementing project management maturity is that the success of project cannot be attained without specific standards or benchmarks (Anantatmula & Rad, 2018:12). Maturity in project management involves the development of repeatable processes and systems, leading to project success. Setting specific project related goals and objectives is not possible without the formulation of certain standards and criteria, and project management maturity is suitably positioned to develop these objectives (Katane & Dube, 2017:4764).

Project management maturity is a systematic method used to evaluate and compare the activities of a company in comparison with best practices or peers' practices, with the goal of identifying a

standardized path to progress (Bourne, 2016:7). The reason why project management maturity is linked to project success is its capacity to bring in innovative ideas and initiative in the course of project management (Hopkinson, 2017:88).

Maturity in project management enables organizations to address critical project management factors, raise the likelihood of a high-quality result and a desirable outcome, and eliminate the danger of project failure (Bhosale, Kavil & Patil, 2017:38-43). Project management maturity has an impact on the possible outcome of every project implemented by organizations. Hence, in this context organization usually implements it as a strategy to attain the appropriate development in project management (Gan & Chin, 2019:269-315). This is mainly attained by conducting progressive maturity processes in the context of the organization. It enables an organization to examine the extent to which it is able to produce a desirable outcome, through proper planning, execution and control. This will ultimately lead to project success; since project management is implemented through controlling and suitable strategies (Muhammad, 2018:36).

Identifying the essential areas that should be improved is vital in project management, however without specific benchmark and criteria this is not possible. In this context project management maturity is that specific benchmark which is appropriate with regards setting appropriate standards that will lead to project success (Albrecht & Spang, 2018:18-35). In this context, most organization recognized that reaching project management maturity is an essential way of attaining the desirable outcome. Implementing a project requires proper management. There are specific resources to be adopted and used (Ronald & Tamara, 2018:13-30). These include personnel, financial, times or schedules and other aspects (Ahmed, 2018:19). These require that specific standards should be followed if the main aim is to attain a specific outcome. In this context, project management maturity enables an organization to attain a desired objective by establishing a benchmark (Titova et.al, 2018:44).

According to Muller (2017:75) there are two main reasons why project management is essential. Firstly, he states that it is important in the sense that it assist build the infrastructure that is required to successfully execute projects. It involves procedures, strategies and techniques, organizational systems, and people's and resources' competences (Sanchez et.al, 2018:235). Secondly, it also assist the organization to acquire insight into their strengths and weaknesses and to be able to prioritize their actions to make the needed changes. Determining the maturity model in the transition domain implies that most of the concepts built to tackle wider organizational change

extend to the project management context. Higher maturity levels are associated with higher levels of project success (Bjelica et.al, 2020:221-238).

Previous studies and research reflected the relationships between maturity and concrete and abstract values. That supports the need to implement this technique during the course of project management (Huang, 2017:34). The core premise is that organizations with higher maturity levels are more likely to achieve desired project effectiveness and efficiency; thus allowing them to attain project success (Heravi & Gholami, 2018:22-37). Hence, this implies that organizations should emphasize project management maturity, since that will lead to project success and an improvement in how organizations implement project management. Hence, this signifies that project management maturity impacts project success (Pasian, 2018:1-24). Proper project management maturity results in superior performance in relation to project success.

Organizations usually operate in specific environments and with other organizations. In this context every environment has specific standards and benchmarks (Steinberg, 2019:19). Project management maturity allows the organization to provide comparative benchmarks that can be applied during the course of project management practices and methods. These benchmarks can be related to organizations which operate in a similar environment (Carvalho & Ogasavara, 2017:21). The practices and methods are utilised by adoption of benchmarking processes. This will contribute towards to project success, since project management maturity usually leads to improved cost and schedule outcomes (Galli, 2018:19-38). The literature supports the relationship between project management maturity and project success by stating that it is a normative description of ideal practices. It establishes the proper benchmarks for an organization to meet in the prevailing situation (Silvius & Karayaz, 2018:52).

It allows the organization and the essential stakeholders to reflect on the current status of the organization. More importantly, it is able to recognize the strengths and weaknesses of the specific project that is in progress. This creates a logical path for future growth and a strategic plan for promoting project management throughout the company (Silva, Duarte Barros & Fernandes, 2019:1-8).Project management maturity is able to benchmark the implementation of projects with best practices in the organization`s environment. Providing the organization project management with the best practices promotes project success (Yazici, 2018:43-54). It implies that the organization will be able to control the schedule, provide sufficient financial resources, as well as the expertise and personal resources of the project management.

During the course of project management, mapping out a structured path that leads to project success is critical. In this context, project management maturity allows the organization to build a systematic trajectory that leads to project success in general (Liu & Zhang, 2018:87). More importantly, the organization should follow a uniform approach in project management, which sets out the timeline, the planning and execution of the resources; including both financial and personnel resources (Cleden, 2017:7). In this context, project management maturity allows the organization to adopt a uniform approach which is essential for allowing the organization to succeed in terms of the project (Brewer & Dittman, 2018:76).

1.2.4 Project management maturity, maturity models and project execution

The importance of project management maturity on project execution has been noted in the literature. The assumption is that project management maturity will lead to well-executed project outcomes (Bjorvatn & Wald, 2018:876-888). The literature reflects that project management maturity reflects how the organization became flexible enough to accommodate project management. What makes project management maturity essential is that it provides the foundation for broader and more fundamental novel ideas, which consequently serve as the basis for guiding subsequent project management improvement initiatives; which will consequently lead to project success (Sumner, 2018:12-23). Many organizations usually contemplate only using techniques and support tools that are specific to project management processes, because that enables them to adapt to changing business environments, but they need a reference model to apply these tools effectively. Project management maturity is usually the benchmark which can be adopted to ensure project success (Crawford, 2014:65).

Projects, as described by PMI as "intentions to execute technique," are seen as critical to an organization's success in today's economy. As a result, project management viability and effectiveness are critical capabilities that businesses should possess. Given the multifaceted (human, specialist, organizational, and environmental) components used in project management, the lacklustre performance of many projects is difficult to comprehend.

To address this problem and come up with some workable solutions, organizations must further develop their project management maturity, or, to put it another way, understand and work on their capacity to manage projects successfully. Several Project Management Maturity Models (PMMMs) have been developed over the past 15 to 20 years as precise, sequential, bit-by-bit structures to help organizations improve their project management cycles and maturity. This need

has recently sparked interest in both academic and operational circles, to develop illuminating reference models to aid organizations in improving their project management measures.

The models are designed to evaluate the current project management (PM) maturity level of a company and lay out the steps that must be performed to reach a higher degree of PM maturity. Many PM practitioners are sceptical about whether the cost and time required to create such models is beneficial, due to the atypical nature of the models and the dearth of empirical studies investigating the extent to which PMMMs influence project execution.

Others have challenged the usage of PMMMs as a 'silver slug of upper hand' that shouldn't be viewed as a 'cure-all' for PM issues (Jugdev & Thomas, 2002:4–14). However, other models have been presented that seem to facilitate the application of such models, particularly in the software industry (Carnegie Mellon, Software Engineering Institute). Several experimental investigations have shown that growing organizational PM maturity (whether attained through a PMMM or otherwise) is associated with improved project execution, regardless of whether PMMMs can effectively further develop organizational PM maturity (Jiang, Klein, Hwang & Hung, 2003:279, Dooley, Subra & Anderson, 2001:23-29).

PM maturity includes efforts made at the organizational level to define and standardise PM measures. Additionally, the idea of organizational PM maturity highlights the significance of updating PM cycles as needed. When an organization reaches its highest level of maturity, it faces ongoing criticism of its project execution throughout its project's life cycles, which can quickly create records of lessons learnt for other current and future project groups and exhibits an organizational culture that supports and engages in both formal and informal organizational learning, to promote ongoing interaction improvement.

One PM measure at the centre of this continuing PM execution review is the project survey (PRs). By anticipating problems through PRs, businesses may move more promptly to address them properly and more affordably. By monitoring their PM KPIs throughout a project's life cycle and sharing the lessons learnt and applying them to new projects, organizations can avoid 'reinventing the wheel' (Newell, 2004:12-20).

Surprisingly, the majority of businesses don't perform project review audits or take any other coordinated steps to learn from their initiatives (Von Zedtwitz, 2002:255-268). Additionally, too many PMMMs forget to emphasise PR as a crucial step in the development of PM maturity

(Williams, 2003:443-451). The set quantity of articles distributed on PR only illustrates the lack of importance that most organizations, especially PMMMs, attach to PR measures.

Further study is required to determine how businesses might develop or enhance PR strategies that will enable continual learning from their efforts. In addition to establishing a system to assess PR maturity, build PR metrics, and enhance overall organizational learning and project execution, this study promotes concentrating on best practices, empowering agents, and defining boundaries for successful PRs.

1.3 Problem Statement

Organizations now utilise project management as a strategy to carry out their project goals. It has developed into a field that is just as important in and of itself as industries like manufacturing, Technology, or banking (Kenny, 2003:43). One of the issues with successful project execution is that far too many projects run over budget, past their scheduled deadlines, or deliver results that are unsatisfactory to their clients. Organizations with low PM maturity are those dealing with these challenges.

Thus, businesses are thinking about implementing a systematic and progressive approach (project management maturity models: PMMMs) to aid in the improvement of their project management measures in order to further develop project execution and PM maturity. These project management maturity models can be used as a tool to assess PM maturity levels and to determine where a company should focus its efforts in order to improve its PM capabilities.

Nonetheless, certain success factors have been attributed to project success, these factors include having awareness of the project scale, having a proper schedule which reflects when the project will be completed and how the project will be managed. Municipalities, especially work with limited resources both financial and with personnel. However, they do not have similar privileges to those held by private institutions, in terms of project management.

Nonetheless, research on project management maturity and project execution success is fairly minimal, especially in municipalities. Thus, there is a need to fill this gap. There is also a need to support empirical studies that reflect the relationship between project management maturity and success in project execution. In this context, the study intends to investigate if the is a relationship between project management maturity and successful project execution.

1.3.1 Rationale and Significant of the Study

The rationale of the research is to learn what information was and is available about the study's topic. The research will contribute to a better understanding of Project Management Maturity and how it relates to Successful Project Execution in the context of municipal projects, as well as a better understanding of Project Maturity Models and their usefulness in project success.

As discussed earlier on, there is a scarcity of studies that examine the relationship between project management maturity and successful project execution. This study will contribute immensely to the research and literature on project management. In addition contributions and arguments that are raised in this study might be essential to show how municipalities should handle their projects in a way that contributes immensely to project success.

1.4 Research Objectives

The research aims show the anticipation the researcher had before beginning the investigation. These are either directly connected to the problem statement or result from it, which emphasizes the study gap that has to be addressed. The two categories of research objectives for this study are the primary research objectives and the secondary research objectives. The project's primary research goal is to achieve the key research objective.

1.4.1 Primary Research Objective

- To establish the relationship between Project Management maturity and success of project execution.

1.4.2 Secondary Research Objective

- Examining the existing Project Management Maturity Models (PMMMs) that are available to organizations.

1.5 Research Question

The research question is an important part of any study since it determines which literature will be studied to acquire data. As it seeks to support the accomplishment of the problem statement's research objectives, the research question is a direct extraction from the research objectives. The major research question and the sub-research questions are parts of the research question.

1.5.1 Main Research Question

- What is the relationship between Project Management Maturity and successful project execution?

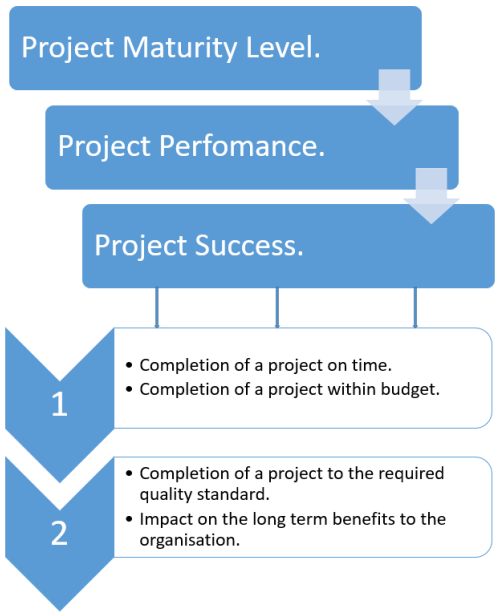
1.5.2 Sub-Research Question

- What Project Maturity models are currently available to organizations?

1.6 Theoretical Framework

A conceptual model is defined as a photographic depiction that depicts the niche area to be researched in a pictorial format (Lashem et.al 2007:93-105), and it also displays the variables that are related to the research issue. It is (conceptual model) commonly used in conjunction with a conceptual graph to develop professional and knowledge-based schemes in which curriculum designers depict reality as it is, without adding or diluting it with what they perceive to be true.

Figure 1.1: Conceptual framework



Source: Basic Conceptual Model (Author Own Construction).

According to the model, a company's project maturity level is linked to its project performance, and strong project performance leads to successful project execution and thus project success.

The model is built on the following general hypotheses, which have been tested in this research:

- The stronger the project performance, the greater the project maturity level.
- The project performance improves as the project's review performance improves.

- The project's performance improves as the Project Review Maturity level rises.

1.7 Definition of Key Concepts

A Project: is a quick operation that is designed to produce unique goods, a service, and/or an outcome (PMI, 2013:5).

Project management: is the application of specific management techniques, tools, and tactics to ensure that a project is completed on time, with the anticipated outcome (PMI, 2013:5-6).

Project management maturity is a term that can be used to characterize an organizational project management system, as well as to indicate an organization's adoption of project management, to manage projects (Backlund, Chroneer and Sundqvist, 2014:839).

Project success: is a project's capacity to fulfil the purposes for which it was designed, with a focus on its long-term advantages (Cooke-Davies, 2002:185).

Project Execution: Is the stage of the project where all that the Project Team has planned is put into effect.

1.8 Research Paradigm

A research paradigm or a set of attitudes and assumptions about current and past studies, governed the present study design (Carrington, 2012:34-160). A research paradigm is the frame of reference that a researcher uses to perceive the world, and consequently, it directs how the researchers gather and analyse data (Carrington, 2012:34-160). Positivism and phenomenology are two research philosophies. The research philosophy known as Positivism is quantitative, while phenomenology is qualitative (Mitchell, 2015:26).

Positivism is a philosophical system that contends that specific positive knowledge is based on natural phenomena and their properties and relationships, according to Macionis and Gerber (2010:58). As a result, all knowledge that can be relied on is obtained from sensory experience and then understood through reason and logic. Nonetheless, this paradigm places a strong focus on the study's dependability, determinism, and objectivism.

The focus of positivist research methodology (methodological individualism) is on small-scale experiments in lab-like settings, excluding the complexity of the outside world (social, psychological, and economic relationships between unemployment and crime or suicide). As a result, positivism is the appropriate paradigm for the study, with its emphasis on a single concept

or phenomenon, generation of meaning from participant data, incorporation of human values, and validation of the veracity of findings.

1.9 Research Approach

A mixed-methods approach was used for this study, with questionnaires collecting both qualitative and quantitative data (Cameron, Sankaran & Scales, 2015: 90-104). The most popular method of data collection was a quantitative approach. To gain a deeper knowledge of the connection between project maturity and successful project execution, qualitative questions were asked. These questions assisted in minimizing any nuisance variables, thus increasing the research's validity (Welman, Kruger & Mitchell, 2005:81-85). An investigation can be either qualitative or quantitative, or a combination of both. When logical approaches are used to create a relationship between information gathered and perception, a qualitative research design is usually used. The approach is more appropriate when the research goal is to answer "why" a particular concept persists, as well asking "what" the respondents' view is (Kennedy & Black, 2013:272). Quantitative research design is frequently used in instances when the researcher chooses to obtain significant knowledge by quantitative means (Williams, 2021:01). In most cases, where these designs are used the researcher requests respondents to fill out questionnaires.

1.10 Research Design

A Research Design is defined as a set of strategies and techniques adopted by a researcher to logically combine various research components in order to address the research challenge (Quinlan, Babin, Carr & Griffin, 2019:44).This then offers insights into how research including collecting data should be done, using a commonly used approach (Creswell & Creswell, 2017:33). The goal of a study design was to ensure that the evidence gained assists the researcher in resolving the research problem. In social science research, determining the kind of evidence necessary to test a theory, assess a programme, or correctly foresee an occurrence is typically part of the data collection process (Creswell & Poth, 2016:37). In this context, research design serves as the framework that guides the researcher in choosing the best methods for gathering and analysing data. A Correlational research design, which aims to determine the relationship between project management maturity and successful project execution, was used in this study.

1.11 Demarcation

The study was conducted within a municipality in Western Cape Province in the department of the local government. The study was done at the given address because that is where the researcher lives. The researcher benefited from this in terms of convenience and increased understanding because the study topic will be applied in the workplace. The results of the study are applicable only to the area being studied.

1.12 Population

The target population for the study was project practitioners within the municipality who are directly and regularly involved with projects. This comprised of project managers, project administrators, project team members and IT technicians. These were internal stakeholders who are involved directly with project execution. These have the lived experiences of both failed and successful projects they have been involved in and can state or analyse the organizations project maturity levels. The sample frame was estimated at 500, Onwuegbuzie (2007:238-254) stated that 10 percent of a representative sample is large enough to allow for generalisation to the entire population. The researcher opted to use 20% (100) of the sample frame; since the larger the sample the more likely it is that results will be accurate. Besides, the respondents are accessible, both physically and economically

1.13 Sampling Method and Sample Size

The prospective respondents were scattered throughout the municipality and work in environments with other people who are not involved with projects. Consequently, random sampling would include too many other people not related to project execution. Therefore the researcher opted for purposive sampling (judgemental sampling) because the individual prospective respondents were distinguishable from amongst the employees in general. Individuals who meet the eligibility criteria were chosen via purposeful sampling.

According to Cooper and Schindler (2011:151), purposeful sampling is the deliberate selection of specific participants to participate in a study. Purpose sampling was used to pick respondents from the general public's capacity to select the most appropriate individuals to participate in the study. Before participating in the study, eligible persons were provided with signed informed

permission forms. Purposive sampling was chosen because it saved the researcher time by directly acquiring rich information from people who are familiar with the study subject.

Sample size: The sample frame is estimated at 500, Onwuegbuzie et.al (2007: 238-254) says that 10% of a properly representative is large enough to allow for generalisation. The researcher has opted to use 20% (100) of the sample frame since the larger the sample the more likely it is that the results will be accurate. Besides, these respondents are fairly accessible, both physically and economically.

1.14 The Data Collection Instruments

The data in this study was collected using a questionnaire. Questionnaires are among the most common methods for data collection in quantitative research. A research questionnaire can be defined as a set of questions that are structured to elicit valid responses from the respondents (Patten, 2016:23). The main purpose of a questionnaire is to elicit responses from respondents on a specific topic, since the main aim of quantitative research is usually generalizing the findings and ensuring agreement of the findings with previous research studies (Yin, 2017:3). Questionnaire are standardized and structured for this purpose. In addition, questionnaires are usually self-administered by the researcher, as in this study. The questionnaires in this study were self-administered by the researcher (Bulmer, 2017:17).

1.15 Data Collection

Data collection, according to Creswell (2013:9) is the process of locating and choosing study participants, obtaining their agreement and gather their information by asking them questions or watching their behaviour. Kothari (2004:95) defined data collection as the process of gathering facts from reliable sources, in order to address the research problem, support the hypothesis, and validate the findings. The data gathering for the study took place in a municipality in the Western Cape. Because the researcher was in control of the fieldwork and no helpers were required and no assistant were needed.

1.16 Data Coding and Analysis

The Statistical Package for the Social Sciences and the spreadsheet analytic tool was used for manual data entry (SPSS). Data coding, in Charmaz's (2006:45) opinion is the vital link between gathering data and determining its significance. Smith and Davies (2010:156) stated that data coding does not establish the completeness of data analysis, and that it is rather a strategy for

putting data in order so that the researcher is then able to grasp the primary information produced by the data.

The process of studying and comprehending data is largely based on theoretical concepts, according to (Tolley, Ulin, Mack, Robinson & Succop, 2016:6).The theory is a useful tool for gathering and categorizing concepts that are under investigation, by analysing patterns, relationships, reaching saturation, and revealing trends; in order to present relevant findings in response to the research challenge.

Both descriptive and inferential statistics were used in this study's analysis of the data obtained from the questionnaires. In inferential statistics, researchers use sample data to extrapolate date about the population (Sanders et.al, 2019:177-185). The Statistical Package for the Social Sciences and a spreadsheet analytical tool were used to analyse the data gathered in this investigation (SPSS).

1.17 Ethical Considerations

In everyday studies, research ethics is critical since it allows academics to protect the integrity of their subjects while also revealing facts. The ethical norms of research were recognized throughout the data collection process in this project. This included obtaining informed consent from participants; because otherwise, research on a specific subject could be damaging to the respondents.

The study maintained confidentiality and the participants' identities remained secret. The study made use pseudonyms to ensure that the identity of the participants were not revealed during data analysis. A consent form was provided for volunteers to complete, and they were given an opportunity to leave the study if they are uncomfortable. Participants were advised not to respond to any questions they are uncomfortable with. Proof of the authenticity of the research and the subject were provided by a letter from the Cape Peninsula University of Technology's Higher Degree Committee (HDC).

1.18 Limitations of the Study

This section covers the municipality in the Western Cape Province, a department of the local government. The study was done at the mentioned location because it is where the researcher lives. The researcher benefited from this in terms of convenience and increased understanding

because the study topic would actually be applied in the workplace. The results of the study are applicable only to the area of study

1.19 Chapter Classification

Chapter One: Introduction And Background Of The Study

This chapter provides an overview of the study, reviews prior research on the subject and its findings, develops the problem statement, and briefly discusses the study's goals, research questions, methodology, data collection tool, technique, and analysis.

Chapter Two: Literature Review

This chapter focuses on Project Management Maturity (PMM), its definition and its impact on successful project execution.

Chapter Three: Project Management Maturity

This chapter focuses on project success factor, project failure factors and further discusses various Project Management Maturity Models (PMMMs).

Chapter Four: Research Methodology

The research methodology that the researcher will use to carry out the study is covered in this chapter. This chapter covers the study plan, the research design, the data collection strategies, sampling procedures, and data analysis techniques. A remark on ethical considerations concludes the chapter.

Chapter Five: Results and Discussion

The results of a survey given to respondents from the provided sample are presented in this chapter. Also provided is the respondents' demographic profile. The chapter also provides a discussion and interpretation of the conclusions drawn from the data collection, as well as data synthesis and analysis**.**

Chapter Six: Research Findings, Recommendations and Conclusions

The study's methodology, findings, alignment with the issue statement, research aims, and research questions, as well as the study's limitations and potential areas for further research, are all summarised in this chapter. The basic conclusions of the study and suggestions for project sponsors and practitioners are also provided.

CHAPTER TWO:
PROJECT SUCCESS

2.1 Introduction

How we define and measure project success has undergone tremendous change throughout the years. The "iron triangle" of time, money, and quality, which was once the primary focus, has expanded to incorporate factors such as project effectiveness after implementation (Jugdev & Muller, 2005:19-31; Williams, 2016: 97-112). In order to find the characteristics of project success that earlier researchers identified, Ika (2009:6–19) reviewed the literature on project success. Our knowledge of what constitutes project success and how to quantify it has changed over time, and a new theory is currently being developed to guide project success research. Articles from the Project Management Journal and the International Journal of Project Management, two of the most well-known project management periodicals at the time, were included in Ika's (2009:6–19) review, which spanned the years 1986–2004.

Project success research has evolved from a focus on the traditional "iron triangle" of time, cost, and quality during the 1960s and 1980s, to include factors like customer satisfaction, organizational benefits, stakeholder benefits, and benefits to the project team, according to Ika's (2009:10-11) analysis of the years between 1980 and 2000. In the twenty-first century, our idea of project success is changing; in order to take into account qualities connected to a project's ability to meet a client's strategic aim and achieve business success.

Project success is not universally defined by researchers. However, there are key characteristics that both academics and practitioners agree upon, which serve as the cornerstone of our understanding of project success (Mir & Pinnington, 2014: 203; Ika, 2009:6-7). Businesses can actually profit from analysing project success. For instance, a study by Todorovic et.al (2015:772-783) underlined the importance of project outcomes documentation. Todorovic *et al.* (2015) stressed that it is challenging for project-driven companies to transfer knowledge from one project to the next. This is because project work has a tendency to result in the formation of numerous "temporary organizations;" each with its unique set of teams. Poor knowledge management is made even worse by a lack of established procedures, project operational routines, and adequate documentation.

On the other hand, a company that is capable of constant learning and development is thought to be at the highest level of project management maturity. Analysis of project results, according to

Todorovic *et al.* (2015:772-783), may yield valuable information. As a result, they developed a framework for assessing project success. According to Ika (2009:7), "There is probably no such thing as absolute success in project management, only the sense of success". Different stakeholders or project participants may see a project's success from different angles. The project sponsor's engagement also affects the project's performance. Therefore, the project manager and his team are not solely accountable for the project's success (Kloppenborg et.al, 2014:9-20).

A project's outcome will be assessed according to how well it satisfies the needs of the beneficiaries, while the project team may define success as finishing the project within the project's budget, time, and quality constraints (Prabhakar, 2008:3-4). Project success is also seen differently as time goes on. Think of a project that attempts to deliver a product that the client will utilise. Although the project is finished on time, within budget, and within scope, the customer eventually finds that the result is not as successful as anticipated, which diminishes the initial perception of success. What is needed is to distinguish between the project and the product's life cycles, as well as to show that the project's life cycle is a subset of the product's life cycle, and these distinctions were both stressed by Jugdev and Muller (2005:21-23). The goal of the project life cycle is to increase the effectiveness of project management, and it typically ends with the delivery of the finished product during the project's close-out phase.

The effectiveness of the project's output after it has been implemented is added to the project life cycle. Ika (2009:7) gave the example of Ford's second-generation Taurus car, which complied with the "iron triangle" standards, but was nonetheless regarded as a failure in the market. By analysing the aspects that affect how project success is perceived, Ika (2009:7-8) as well as Munns and Bjeirmi (1996:81-82) underlined the importance of differentiating between project management success, project success, success criteria, and success factors. Each of these principles is discussed in further detail in the following sections.

2.2 Difference between Project Success and Project Management Success

Success in project management and projects often go hand in hand (Munns & Bjeirmi, 1996:82). A project team may be falsely acknowledged or charged, depending on whether a project is considered a success or failure (Ika, 2009:13). As a result of this seeming contradiction, De Wit (1988:165) advocated a distinction between project success and project management success. Success's exact definition is still up for debate. The assumption made by authors when they mention project success—whether implicitly or explicitly—is that they are talking about more than

just effective project management (the project success) (Ika, 2009:13). Project success is not the same as project management success (Cooke-Davies, 2002:186).

Scholars have conducted studies to differentiate between project success and project management success; when seeking to quantify success (Cooke-Davies, 2002; De Wit, 1988) stated that the two while related can be very distinct from each other. Effective achievement of cost, schedule, and quality targets was acknowledged as project management success (Alzahrani & Emsley, 2013:314). On the other hand, project success is focused on the project's end objectives. Project success is concerned with its exterior efficacy, while project management success is concerned with a project's internal efficiency (Shenhar, Levy & Dvir, 1997:6). According to De Wit (1988:164), effective project management can contribute to project success but is unlikely to avert project failure.

2.2.1 Project Success

De Wit (1988:165) stated that a project is deemed an overall success if it satisfies the technical performance specification and/or mission to be accomplished and if key members of the parent organization, key members of the project team, and key users or clients express a high level of satisfaction with the project's outcome (Ika, 2009:13). The success of a project depends on the project manager's ability to understand when and how to use hard skills and soft skills for working within an organization; to define business value, clarify vision, determine requirements; to give direction; to build teams; to resolve problems; and to mitigate risk (Belzer, 2001:1). The job of project management within projects must be placed within the framework of a bigger project, with various external criteria and long-term expectations, in order for this role to be regarded as effective (Munns & Bjeirmi, 1996:86).

Unquestionably, management and leadership skills are two of the most crucial qualities for a project manager. Once these two project management criteria are successfully merged and implemented, the project's success rate will almost certainly rise. The "hard" management skills include organizing, planning, directing, and keeping score (Archer et.al, 2010:434-438). In order to implement a carefully thought-out strategy, competent staff management is essential to success (Azim et.al, 2010:399). A variety of skills are needed to manage projects successfully, including interpersonal aptitude, technical proficiency, and cognitive aptitude; as well as the ability to understand the environment and the people in it and dynamically implement appropriate leadership behaviours (Welfolo , 2019:71). Many efforts fall short of their full potential, not for lack of funds, technology, or procedures, but rather due to improper handling of the human factor

(Burke & Barron, 2007:223). In order to ensure project success, the project manager and project management are both essential (Chordas, 2008:66-69; Kerzner, 2013:1-10; Trebilcock, 2007:40).

Hwang and Ng (2013:272) listed social skills, decision-making skills, problem-solving skills, the capacity to recognise opportunities, and change management as major human attributes determining project success. Many of the skills necessary to manage construction projects are exclusive to project management, such as critical path analysis and project cash flow forecasting, according to Edum-Fotwe and McCaffer (2000:112). Modern project management practices also call for additional general and management knowledge, as well as expertise outside the realm of traditional engineering. Morris and Munns (1996:82) as cited in Munns and Bjeirmi (1996:82) indicated that having a specific aim, competitiveness, customer happiness, market availability, profitability and perceived value of the project, a correct implementation method, a realistic target, and third parties are all important factors in project success. The nine project success elements are listed in Table 2.1 below.

Table 2.1: Project elements of success

Elements of Success	Explanation
▪ Realistic goal	The project's principal goal must be feasible and attainable.
▪ Competition	Due to competition and globalisation, project success has become increasingly more important to businesses.
▪ Client satisfaction	The project must suit the needs of the client, and the end product or service must satisfy the client.
▪ A definite goal	The goal of a project should be established from the beginning so everyone knows what they're working towards.
▪ Profitability	To recoup the investment spent to launch the project, it must be able to generate profit once it is operational.
▪ Third parties	The project may require contributions from a variety of specialists within the organization.
▪ Market availability	The target market for your project should be ready to support your product or service.
▪ The implementation process	To avoid any hazards that may arise when a product or service is not properly deployed or used, the way in which it should be used must be clearly defined.
▪ The perceived value of the project	The project must add value to those who will benefit from it, either by making people's lives better or by lowering their costs.

Source: Morris and Munns (1996:82) as cited by Munns and Bjeirmi (1996:82)

Furthermore, Table 2.1 above shows that the tabulated factors must be considered for a project to be successful, and that a project with no objective or intent to serve any client will almost certainly not be profitable.

2.2.2 Project Management Success

According to Ika, (2009:13), project success includes concerns for efficiency and effectiveness; whether internal or external, short-term or long-term, must be stated by the project team. Project management success refers to efficiency, which is an internal concern for the project team (Shenhar et al., 1997:6). Project success can be distinguished from project management success by also looking at time and the quantifiable nature of specific project management objectives (Ika, 2009:13). It is fair to assume that project management failure may lead to project failure, especially under unique situations, but that the project may also fail in spite of outstanding project management. Success in project management may lead to project success, but the contrary is not true (Ika, 2009:13). According to De Wit (1988:165), effective project management can contribute to project success but is unlikely to avert project failure.

According to Munns and Bjeirmi (1996:82) ineffective project managers, subpar project establishment, subpar activity definition, subpar management support, subpar project planning, and subpar management of project management methodologies are all elements that might lead to project management failure. Table 2.2 below provides a list of the causes of project management failure.

Table 2.2: The possible causes of project management failure

Causes of Project Management Failure	Explanation
▪ Inadequate basis for project	A project must be set up to achieve a specific goal. Before any project is started, a feasibility assessment must be completed.
▪ Wrong person as project manager	To complete a project, an effective project manager with the requisite abilities and expertise is essential.
▪ Top management unsupportive	Because other decisions require top management support, a project manager cannot perform without the support of top management.
▪ Inadequately defined tasks	Roles, duties, and responsibilities must be clearly defined; beginning with the project planning stage.
▪ Lack of project management techniques	A project manager should be able to use project management techniques such as Gantt charts, WBS, and RACI, among others. These strategies make project management easier for project managers. The project will suffer if these are missing.
▪ Management techniques misused	The project management approaches must be applied in order to achieve the project's goals.
▪ Project closed down not planned	Before a project can begin, its resources, cost, time, and quality must all be planned. Poor planning has a negative impact on project management.

▪ Lack of commitment to project	During the project's life cycle, time, budget, and resources must all be considered. A project's success depends on the complete commitment of individuals involved.

Source: Adopted from Avots as cited by Munns and Bjeirmi (1996:82)

Table 2.2 above further demonstrates that a project is guaranteed to fail if it has a weak foundation, an ineffective project manager, poorly defined roles, poor planning, and little support from management. It also highlights the need for proper planning, so that a qualified project manager with experience in project management can lead the project, as well as the importance of top management support for the project's success. In addition to fulfilling standard project management duties, today's project managers also have the additional responsibility of making sure that the project is managed as sustainably as is feasible (Hwang & Ng, 2013:274).

It's crucial to keep in mind that while effective project management techniques will help a project to be completed, project management won't stop a project from failing. Practically speaking, a successful project will not depend only on the performance of the project management, but a successful project can benefit even more from outstanding project management (Munns & Bjeirmi, 1996:86). According to Kalinová (2007:33), project managers' inexperience, prevents them from fully developing crucial facets of effective project management, including team member selection and preparation, cooperation development, communication plans, decision-making methods, the acceptance of personal differences, conflict prevention and resolution, handling of objections, and so on.

2.2.3 Conclusion

In order to lay the groundwork for our understanding of what constitutes project success, Cooke-Davies (2002:185) as well as Munns and Bjeirmi (1996:82), among others, underlined the significance of differentiating between project management success and project success. A project's completion within the allocated time and budget, while keeping the required standard and scope is referred to as project management success (Serrador & Turner, 2015:30). According to Munns and Bjeirmi (1996:81–82), project management is concentrated on attaining the project's goals in the short-term, through the use of planning, control, and monitoring tools and techniques. As a result, achieving project efficiency is necessary for effective project management. It was emphasized by Mir and Pinnington (2014:215) as well as Berssaneti and Carvalho (2015:638) that the "iron triangle" of time, money, and quality is linked to project success efficiency factors.

Conversely, project success is primarily focused on the long-term benefits of a project and its capacity to fulfil the needs for which it was created. Cooke-Davies (2002: 185) as well as Ika (2009:7-8) described project success as a broad, ambiguous term that includes both efficiency and effectiveness.

According to Prabhakar (2008:4) the success of a project should be determined by two factors: whether the project's technical requirements, budget, and timetable were met, and how well the project furthered the organization's strategy. Munns and Bjeirmi (1996:82) asserted that given the distinction between the two ideas, a project can succeed even if project management does not, and vice versa. For instance, the 2010 FIFA World Cup might be seen as a successful completion of the series of initiatives done to build new stadiums and infrastructure within the traditional "iron triangle" of limits; but as Molloy and Chetty (2015:88-107) pointed out, the event's intended outcome for the host nation was to hasten economic development, which was something the programme did not manage to achieve.

2.3 Success Criteria and Critical Success Factors

Critical success factors (CSFs), often known as project success criteria, allow us to identify and quantify the success of a project. Although academics disagree on what success is, they seem to agree on the presence and significance of success criteria and determinants. Understanding the differences between the two is also essential (Ika, 2009:8). Project success criteria are the attributes that will be used to judge a project's success. They will be used to assess the project manager and his team, and it is ideal if they are decided upon before the beginning of a project. Researchers like Ika (2009:8) and Cooke-Davies (2002:185) utilized them to determine whether a project was successful or unsuccessful and referred to them as standards or principles.

Project success and the parameters that define it have been extensively contested in the project management literature, with only a few authors coming to an agreement (Mir & Pinnington, 2014: 203). As previously stated, the most common method of determining a project's success is the "triple constraint," sometimes known as the "iron triangle," of time, cost, and performance (quality). According to Brown and Hyer (2010:9–10), the triple constraint has some appeal as a method of gauging a project's performance, but it is not comprehensive enough to account for other factors that contribute to a project's success.

Contrarily, success factors are areas upon which the project management team will focus its efforts to make sure that the success criteria are met (Cooke-Davies, 2002:185; Jugdev & Muller,

2005:24; Prabhakar, 2008:3). According to Williams (2016:97-112), not only is the nature of project success complex and multi-dimensional, but success factors also interact with one another and are interdependent. In an effort to determine the value of project management, several studies have examined the connection between project management effectiveness and project success. In an effort to demonstrate the value of project management, Mir and Pinnington (2014:202-217) conducted a study to clarify the connection between project management effectiveness and project success.

According to their research, previous attempts to connect project management performance with project success had not been able to explain how the two things relate to one another. Although their research was restricted to organizational events projects, Cserhati and Szabo (2014:613-624) conducted a study with the aim of identifying features for success criteria and re-organized success factors, as well as attempting to examine the relationship between the two. To evaluate project performance, Mir and Pinnington (2014:203-204) employed a construct that was based on earlier work by Shenhar et al. (1997:5-13).

Table 2.3: Success Criteria and Success Factors

Initial Success Factor	New Re-organized Success Factors
Project Efficiency	Project Efficiency
Impact on the customer	Impact on the customer and financial success
Business success	Impact on long term benefits
Preparing for the future	
Impact on the team	

Source: Mir and Pinnington (2014:210-214)

This strategy's effectiveness was evaluated across five different criteria, which were ultimately condensed to just three. Both the initial and the rearranged success variables are listed in Table 2.4 below.

Table 2.4: Success Criteria for Organizational Events Projects

Success Criteria for Organizational Events Projects
Meeting the major objectives of a project
achieving specific objectives
Sponsor and contractor satisfaction
Local and national stakeholders' satisfaction

Source: Cserhati and Szabo (2014:619)

To evaluate the performance of organizational events projects, Cserhati and Szabo (2014:619) employed four criteria in Table 2.4 above, distinguishing between "task" and "psychosocial" success aspects. The most measurable aspects of a project's performance, such as cost and schedule, are measured by task-related criteria, which are linked to Mir and Pinnington's (2014:213-214) success factors. Team morale and customer satisfaction are two examples of psychosocial success elements. The "Project Management Performance Assessment" (PMPA) paradigm was used by Mir and Pinnington (2014:204–205) to evaluate project performance.

This model was created by Bryde (2003) and validated as closely resembling the European Foundation of Quality Management, Business Excellence Model (EFQM), an established performance assessment model that incorporates Total Quality Management (TQM) principles and is appropriate for project management (Qureshi et al., 2009; Din et al., 2011).

Table 2.5: Performance Factors

Initial Performance Assessment Factor	Performance Factors that have been Reorganized
PM Leadership	PM Leadership
PM Staff	PM Policy and Strategy
PM Policy and Strategy	PM Partnerships and Resources
PM Partnership and Resources	PM Environment
Project Life-cycle Management Process	
PM KPI's	

Source: Mir and Pinnington (2014:210-214)

Six components of the Project Management Performance Assessment Model (PMPA) were utilized to gauge a project's performance. The six performance variables should be restructured into four factors, as per Mir and Pinnington's (2014:213-215) findings. These four elements are all displayed in Table 2.5 above.

These elements were separated into those that are directly related, such as "project management environment," and those that are indirectly related, such as "leadership," "policy and strategy," and "partnerships and resources." In order to better reflect the organizational context in which project management occurs, the performance factors "project management personnel," "project lifecycle management process," and "KPI'S" were combined to form the performance factor "Project management environment." Cserhati and Szabo (2014:621) developed six dimensions to gauge the effectiveness of organizational events projects. Instead of using Mir and Pinnington's (2014:204-205) performance factors, they used the term "success factors." However, both terms refer to areas that will be prioritized in order to satisfy the necessary success requirements. These components are broken down into task-related and relationship-related success factors in Table 2.6 below.

Table 2.6: Project Success Factors

Project Success Factors
▪ Project definition
▪ Contract strategy
▪ Project leadership
▪ Project team's organizational culture
▪ Factors that affect relationships contractor and sponsor communication and cooperation
▪ Collaboration with regional and national stakeholders
▪ Task related factors
▪ Relationship related factor

Source: Cserhati and Szabo (2014:621)

Isaacs (2018:23) premise that subjective criteria made up of the perceptions of various stakeholder interest groups are crucial when evaluating a project's performance was supported by Cserhati and Szabo's (2014:620) study. The success of organizational event efforts was also found to be more influenced by relationship-oriented success variables than by task-oriented

success variables, according to Cserhati and Szabo (2014:621). Turner and Müller (2005:49–61) made the suggestion that the project manager's leadership style be added as a success factor after seeing that studies on project success factors appeared to ignore the project manager's position and leadership style. According to Creasy and Anantatmula (2013: 36–51), a project manager's personality traits play a role in the success of a project. Project leadership was listed as a success criterion in both Cserhati and Szabo's (2014:621) and Mir and Pinnington's (2014:210-214) lists. However, Cserhati and Szabo (2014:621-622) found that the completion of the primary and specified objectives' success criteria could only be met through advanced task and responsibility management, which gives teams guidance on how to carry out their tasks (Cserhati & Szabo, 2014:621-622). This supports earlier arguments that project management assists the efficiency of a project (Berssaneti & Carvalho, 2015:638).

According to Mir and Pinnington's (2014:212-215) investigation, there is a statistically significant correlation between successful project management and successful projects. The Key Performance Indicators (KPI), lifecycle management procedure, and Performance Management (PM) staff performance aspects when combined, had the most impact on the success variables, whereas leadership, policy and strategy, partnerships and resources are factors that affect performance but are controlled by upper management. The authors claimed that these factors represent operational aspects that directly relate to project success. Because respondents primarily represented project operational staff, it is possible that they were unaware of how these variables affected success.

Serrador and Turner (2015:32) as well as Berssaneti and Carvalho (2015:647) stated that a project's capacity to meet technical requirements and efficiency metrics was influenced by the project management performance. However, it doesn't seem as though there is a clear link between the efficiency of project management and intangible success indicators like "customer satisfaction." It is still unknown how project management maturity affects project performance. According to Berssaneti and Carvalho's (2015:642-647) research, there is a strong correlation between a project's ability to adhere to its budget, timeline, and technical specifications. Joslin and Muller (2015) succeeded in showing that an organization's project management methodology positively correlates with higher success and that an organization's proficiency with its chosen methodology may be viewed as a component of success.

A more thorough evaluation that takes into account factors like contribution to organizational strategy, stakeholder/customer satisfaction, and efficiency is necessary, according to Cserhati and

Szabo's (2014:614) review of the literature on project success criteria. According to Jugdev and Muller (2005:29); Berssaneti and Carvalho (2015:638) and Cserhati and Szabo (2014:614) this assertion is supported by the literature. Project performance is therefore influenced by factors that can be assessed both objectively and subjectively, made a distinction between psychosocial success criteria, such as customer satisfaction, team motivation, and other softer relationship success variables, and task-related success criteria, such as cost, time, and performance.

A study conducted by Haried and Ramamurthy (2009:56-71) confirmed the importance of psychosocial criteria in project success. Their study looked at how the relationship between a customer and a vendor influenced the effectiveness of international sourcing efforts. Their research showed evidence that handling relationship issues from both the client and vendor perspectives is critical to project success.

The efficient and prompt exchange of information, as well as the vendor's willingness to adapt their service to the needs of the customer, were key factors in the success of international sourcing projects. The importance of stakeholder satisfaction in determining a project's success is stressed by Cserhati and Szabo (2014:614), Berssaneti and Carvalho (2015:638), as well as Mir and Pinnington (2014:210–214). Eskerod, Huemann and Ringhofer (2015:42) claimed that one of the major causes of project failure was still unsatisfied stakeholders.

2.4 Project Failure Factors

Project management failures are more frequently researched than project management successes (Gupta, Gunasekaran, Antony, Gupta, Bag & Roubaud, 2019). According to Turmanidze (2020:20), the main reason projects fail so frequently is the fact that understanding and analysing such failures can be vital to future project success. We do this by carefully analysing the failed projects and consulting with the stakeholders.

We must first define what project failure is. The saying "crisis comes when we can't respond to a threat properly" is one that is frequently heard (Clayton, 2011:77). Despite the fact that this is true, project management failure is a very complex event that involves multiple crucial elements.

- **A poorly defined project scope**: indicates that neither the project team nor the sponsor fully understand the project's goals and objectives.

- **Inadequate sponsor support**: is a sign that top management is not fully committed to the project or that the project's external sponsor is not prepared to support the planning or execution process.
- **Lack of management skills**: (1) There is no effective risk management, (2) An inexperienced project manager is unable to handle change or communicate effectively, and (3) The project crew is inexperienced.
- **Poor planning**: which leads to incorrect resource allocation for services, such as for the budget, schedule, human or technological resources, etc.
- **Absences, inadequate PM techniques, and lack of corporate understanding**: These shortcomings show that the project's crucial components are either poorly planned or not under control. The project cannot avoid departing from the original plan or altering the method used to carry it out.
- **Unrealistic expectations**: Such expectations may be held by numerous interested parties and stakeholders. For example, the sponsor might have a skewed picture of the deliverable or the project manager might urgently need the sponsor's help while the sponsor thinks the project team doesn't need it, etc (Clayton, 2011:80; Lehman, 2016:45).

Industry standards, a single company's management techniques, or a project team's collective project management expertise may influence an increase or decrease in the number of failures and causes (Turmanidze, 2020:21). Any project stakeholder or involved relationship has the potential to create a failure. For instance, IBM stated in 2019 that only 41 percent of the projects achieved the specified requirements, due to insufficient schedules, budgets, and quality control procedures (IBM Investor Relations, 2019). Only 37 percent of companies managed to complete the projects on schedule, 35 percent were able to deliver the full benefits, and 41 percent were able to complete the projects within their allotted budgets, according to the State of Project Management Survey 2017, which presents the survey results of 400 UK companies (Wellingtone Project Management, 2017:25-30).

A lack of sponsor support was cited as the primary reason for project failure by 41 percent of underperforming project managers and 17 percent of champion project managers in the largest project management study ever conducted by the PMI, which included feedback from 3,234 project managers, 200 senior executives, and 510 PMO directors from various industries around the world (PMI's Pulse of the Profession, 2017:30). Additionally, businesses with sponsors who were actively involved reported 40 percent more successful projects than businesses with leaders who were less actively involved (PMI's Pulse of the Profession, 2017:30).

With a focus on initiatives that are related to engineering, many causes for project failure have been discovered. Despite having a failure rate of up to 50 percent over the years (Dlulisa, 2019:62), the IT sector employs managers who are technically skilled. Project failure, according to Dlulisa, (2019:63), is the inability to finish a project within the allocated budget, timeframe, and technical requirements. This is primarily a result of the specifications not being met, or the stakeholder being dissatisfied and hence unhappy. The biggest mystery is still why projects keep failing despite having access to all of these tools, strategies, and managerial hard skills. Table 2.7 below is a summary of the common justifications for failure factors.

Table 2.7: Causes of Failure Factors

Causes of Failure Factors	
Exclusion of project leader from the beginning.	Underutilization of tools.
Poorly defined project scope.	Failure to adequately track project progress and requirements.
Inadequate risk management.	Project scope creep.
Inaccurate cost estimations.	Inexperienced project managers.
Lack of detail in the project plans.	Little communication at every level of management.
Inadequate documentation and tracking.	Conflict in project management.

Source: Dlulisa (2019:62)

A project's success or failure is mostly defined by whether the time, money, quality, and scope expectations are met or not (Burke, 2010:265). Burke (2010) summarizes the research into reasons for failure, excluding what has already been mentioned previously, as seen in Table 2.8 below.

Table 2.8: Reasons for Project Failure

Reasons for Project Failure	
Unmet client needs.	Inadequate resources.
Inadequate feasibility study.	Inadequate team leadership.
Unclear defined scope.	Poor communication.
Poor project costing.	Lack of stakeholder involvement.
Time needed to complete the project.	Absence of vision and direction.

Source: Burke (2010:265)

In most cases, poor execution shows up as late deliveries, cost overruns, underperformance, poor quality, and deliverables that fall short of what the client had hoped for. The project execution process is divided into four stages: initiation, planning, execution, and handover. Given that the successful completion of the project is likewise a process, this shows that project failure is a process (Jowah, 2013:276). Failure can happen at any stage of this process so, there is a need to properly examine every project failure process; including its pros and cons. Through good project risk management and the leader's capacity to gather the necessary human resources, the project execution should take a proactive approach to avoiding potential failure in the future.

The success of the process is not exclusively the responsibility of the project manager and the project team. Although improvements to project management principles have been achieved, governance still plays a critical role in the process, by ensuring its transparency and clarity throughout (Turmanidze, 2020:21). In 2018, a poll was carried out by the British Association for Project Management (APM) to identify the elements that influence a project's success. One of the best strategies to ensure project success, according to 92 percent of the 900 practitioners who participated in the survey, is clarity of the project's purpose and objectives (Association for Project Management, 2018).

According to a document published by the UK's Office of Government Commerce (OGC), the following are the typical causes of project failure:

- The primary strategic goals of the project and the organization, including agreed-upon metrics for success, are not clearly stated at the outset.

- Not having clear ownership and leadership from senior management and ministers.
- Ineffective interaction with stakeholders.
- Lack of project management and risk management expertise and a tested strategy.
- Lack of familiarity and communication with upper levels of the business and the supply industry.
- Insufficient attention is paid to breaking-down development and implementation into manageable segments.
- Review of ideas that gives consideration to one-time costs over long-term savings (especially when obtaining corporate benefits).
- Top levels in the company lack knowledge of and engagement with the supply industry.
- Lack of efficient client, supplier, and supply chain project team integration (Morgan & Gbedemah, 2010:36).

Scope creep is the main problem that inadequate sponsor assistance results in, according to PMI. Scope creep is the unintentional expansion of the project's scope without modifying the spending plan, the resource allocation, schedule, or other parameters. Each extension costs more to finish than was first budgeted for when the project began. The main contributor to scope creep, according to PMI's Pulse of the Profession (2018:60), is a lack of clarity regarding the project's deliverables or scope, which needs to be communicated to the project manager and the team responsible for carrying out the project up front.

The findings above demonstrate how complex project management productivity is as a whole, and how it depends on more than just the project manager or the project team (Turmanidze, 2020:22). Other factors that are essential to success include the organizational culture, a sponsor's involvement in the processes, and the framework for project governance (Turmanidze, 2020:22). Effective project governance can therefore foster a positive work environment that will boost the project team's productivity (Jia, Chen, Ding & Wong, 2012:1-14).

2.5 Chapter Summary

Project management factors affect success, particularly those related to the accomplishment of efficiency within a project, according to studies aiming to link project management performance with success (Berssaneti & Carvalho, 2015; Martinsulo, Hensman, Artto, Kujala & Jaafari, 2006:92-95). Additionally, it would seem that a context-specific focus makes it simpler to establish the connection between success and performance (Cserhati & Szabo, 2014; Khang & Moe, 2008:72-84). Ika (2009:7) said that "the only thing that is clear in project management is that

success is an ambiguous, inclusive, and multifaceted notion whose definition is connected to a given context," which is consistent with this observation.

The degree of control granted to the project manager, the support of the project sponsors, the organization's framework for project governance, and the project team's adaptability in negotiating the final scope of work are all elements that influence the success of organizational change projects, for instance (Ives, 2005:49).

In the part that follows, we examine the research on project management maturity models, which have evolved as a way to gauge an organization's adoption of PM methodology and its level of maturity in doing so. Additionally, it reviews prior studies that attempted to demonstrate a causal link between project management maturity and project success as well as the models developed to measure project maturity.

CHAPTER THREE:
PROJECT MANAGEMENT MATURITY

3.1 Introduction

Project Management is employed by many sectors as a tool to achieve successful project execution. A project's success is determined by meeting the three constraints of cost, time, and scope (Serrador & Pinto, 2015:1040-1051). The implementation of project management techniques inside an organization can determine whether or not project objectives are met. This means that an organization must have a technique for determining the extent to which project management principles have been adopted by individual employees and the organization as a whole (Mmbengwa, 2016:19). The maturity level of project management is another name for this necessity (Mmbengwa, 2016:19).

The majority of businesses are using project management to some extent as the most effective means of creating and implementing new or enhanced products, services, and organizational process improvements (Cleland & Ireland, 2002:66). In order for businesses to profit from project management, researchers and practitioners have been working to develop and enhance their project management capabilities (Yimam, 2011:40). The implementation of innovative methodologies and techniques, benchmarking, maturity models, training, mentorship, and benchmarking are just a few examples of methods used to enhance an organization's project management capabilities (Yimam, 2011:40). One tool that businesses can use to strengthen their project management capabilities is the project management maturity model.

According to Yimam (2011:40), the use of maturity models offers a framework for the deliberate and ongoing development of project management expertise, in order to continuously deliver successful projects. Generally speaking, maturity models let an organization assess the maturity of its project management practice, or, more specifically, the extent to which it is carrying out project management in relation to its peers in the industry generally or in relation to better practice in the sector (Yimam, 2011:40-303). Additionally, maturity models provide topics for change and indicate important areas that need assistance in designing improvement initiatives.

3.2 Project Management Maturity

A measure of how well an organization's project management processes are integrated is called project management maturity (Mmbengwa, 2016:19). Project Management Maturity is a term that can be used to describe a system of organizational project management or to describe an

organization’s development in adopting project management techniques to manage projects (Backlund et al., 2014:837-846). The PMI’s Guide to the Project Management Body of Knowledge (PMBOK) defines project management as “the application of knowledge, skills, tools, and processes to project activities in order to meet project requirements” (PMI, 2013: 5).

The project management maturity level of an organization indicates the degree of advancement made in the application of its knowledge, skills, tools, and processes. Project management maturity is defined by (Pretorius, Steyn & Jordaan, 2012:1–12; Ofori & Deffor, 2013: 41) as an organization’s approach to project management and to having certain standards and processes in place, to manage projects successfully and efficiently. Project management maturity is a challenging measurement instrument used by an organization to evaluate its current project management standards and procedures (Kwak & Ibbs, 2000:32-34).

An organization's project management maturity begins the day it implements a model. Based on current models and their needs, organizations can create their own project management maturity models (Bogopa, 2019:51). Project management maturity models can provide a road map for an organization to follow, as it progresses from immature to mature project performance (Bogopa, 2019:60). According to Jugdev and Thomas (2002:4-14), project management maturity models could be a solution or a support system for tying projects to strategy and organization. Maturity models are developed with a common objective in mind; to assist organizations in improving their project processes and maturity levels. Beyond the use of tools and procedures, project management has advanced to the point where it has become a company-wide capability (Isaacs, 2018:28). After organizational project management was adopted and pursued, practitioners were confronted with the continual need to improve project management capabilities within their organizations (Crawford, 2006:74-97). In order to measure an organization’s project management capabilities against a set of standards and best practices, maturity models have become popular (PMI, 2013:2-4; Backlund et al., 2014:837-846).

The objective was to pinpoint elements of a company’s project management expertise that, if improved, would accelerate its development and lead to greater effectiveness, competitive advantage, success, and performance (Backlund et al., 2014:837-846). There are about 30 distinct maturity models available, all of which are based on the idea that an organization develops through various stages of maturity in the application of its procedures, according to (Backlund et al., 2014:837-846), as quoted by (Issacs, 2018:30). The sections that follow provide descriptions and comparisons of several maturity models.

3.3 Correlation between Project Maturity and Project Execution Success

As was covered in the sections above, it has been demonstrated that project management is used to increase efficiency and project success in organizations (Mir & Pinnington, 2014:212-215; Pollack & Adler, 2015:17-24). Researchers such as Mullaly (2006:62–73), Sonnekus & Labuschagne (2003:3–25), Labuschagne & Marnewick (2008:2-33) and Pretorius et al., (2012:1–12) have all attempted to show the benefits of maturity models or use maturity models to link higher levels of maturity and project success.

Ofori and Deffor (2013:42) found that despite enormous advances in the field of project management, a significant number of projects still fail; in their study on the maturity levels of project management in different Ghanaian firms. Projects generally have a low success rate. Other scholars (Jayaram & Narasimhan, 2007:241-256; Belassi, Kondra & Tukel, 2007:12–24; Yazici, 2009:14-33) have also noted this paradox despite improvements in the field of project management.

A prior study, came to the conclusion that the poor project success rates in Ghana were brought about by a lack of standardized project management tools, techniques, and processes, as well as some cultural issues raised by Ofori and Deffor (2013:42). This conclusion is further supported by Yazici (2009:14–33), who investigated the combined impact of organizational culture and project management maturity on business success and project performance. Yazici (2009:14-33) observed in their study that organizational culture and maturity were positively correlated with increased company success. Oddly, there was no connection between maturity and project performance, but there was one between a better company culture and better project performance.

Organizations display differing levels of maturity at various stages of the project management lifecycle, according to Ofori and Deffor's (2013:58) research. These findings support the OPM3 approach developed by the PMI (2013:32–33), which evaluates process group maturity across the project lifecycle. It's noteworthy to observe that organizations in the public sector rated the lowest for maturity. The writers were particularly concerned about this because the public sector manages the majority of development projects. The nation's many project failures could be attributed to a lack of maturity.

Du Plessis (2014:3) supported the notion that PM capability depends on more than just project management processes; asserting that people's actions and their capacity to effectively use

project tools and techniques are what ultimately determines the success of projects. According to Cooke-Davies (2002:189), people are the drivers of processes, and how they carry them out determines whether or not they will provide the desired results. This exemplifies one of the limitations of maturity models that Backlund et al. (2014:840) noted, specifically that they are unable to account for the intangible aspects of project management that also have an effect on organizations' project management capabilities.

Consequently, both hard and soft skills must be cultivated for a business to increase its project management capabilities (Fernandes et.al, 2014:81). Du Plessis (2014:3), Cook-Davies (2002:185–190) and Belzer (2001:1-6) all criticised the emphasis on technical or "hard skills" to deliver projects and concurred that the human or "soft skills" of project management should not be disregarded.

Pretorius et al. (2012:1–12) examined the association between project management maturity and project success; as well as the relationship between maturity within the nine knowledge domains and project outcomes in the engineering and construction industries of Southern Africa. Linking project maturity with success was the main objective of the study. Similarly to Labuschagne and Marnewick (2008:2-33), Sonnekus and Labuschagne (2003:3-25) also attempted to draw a connection between the maturity of IT project management and the success of IT projects. There was no evidence of a relationship between project success and project management maturity in any of the three investigations (Sonnekus & Labuschagne, 2003:3–25; Labuschagne & Marnewick, 2008:2–23; Pretorius et al., 2012:1–12).

The three studies arrive at the same conclusion, which is that a multitude of factors affects an organization's capacity to manage projects. The concept of success, however, must be made clear, according to Labuschagne and Marnewick (2008:33). This may imply that if the project success criteria are more clearly defined, it might be easier to find a correlation between maturity and project success. This was not the case in the studies conducted by Pretorius et al. (2012) and Labuschagne and Marnewick (2008:16), in which participants were permitted to define success as they saw fit.

According to Pretorius et al. (2012:3), there are four dimensions that are crucial for project management success. These are:

- The competence and expertise of the project manager.
- Organizational structure.

- Measurement systems.
- Management techniques that reflect the culture of the organization.

Pretorius et al. (2012), Backlund et al. (2014) as well as Ofori and Deffor (2013) found the following contradictory theories in the literature:

- Despite the fact that there seems to be a link between maturity and performance, there is no data to support this.
- The success of a project is not always dependent on its maturity level in project management.
- The development of an ICT organization in South Africa does not correlate with project success.

Contrasting with these results is the study by Pretorius et al. (2012:4–10), which also looked at the maturity of the nine knowledge categories inside an organization and its effect on project success. The results showed that organizations that have more refined scope, schedule, cost, and human resource management do produce projects that are more successful. The maturity of the knowledge domains of quality management, communication management, risk management, and procurement management were found to be unconvincingly unrelated to project success. The conclusion was drawn that the knowledge domains contributing the most were those that were identified as “core 41 functions,” while those contributing the least were found to be more enabling functions.

Table 3.1: Causes of Projects Succeeding, Failing, or Encountering Challenges

Rating	Reason for Success	Reason for Failure	Reason for Challenges
1.	Project team.	Communication Infrastructure	Requirement Definition
2.	Understanding users needs	Requirement definition.	Handling change.
3.	Communication Infrastructure	User involvement Infrastructure	Communication.
4.	Requirement definition.	Executive support.	User involvement

Source: Sonnekus and Labuschagne (2003:11)

According to survey data compiled by Sonnekus and Labuschagne (2003:11), Table 3.1 above provides the four most common reasons why initiatives succeed, fail, or meet difficulties. The table

demonstrates that the softer challenges that IT projects in South Africa were now facing predominated. Pretorius et al's (2012:9-11) conclusions concur with this one.

Two further studies by Mittermaier and Steyn (2009:95-107) as well as Jugdev and Thomas (2002:4–14) contributed to highlighting the benefits of maturity models. Jugdev and Thomas conducted a study in 2002 to assess PM maturity models from a range of resource-based viewpoints, in order to determine whether or not they could be characterized as a source of competitive advantage (RBV). The authors' findings suggested that If firms focus on the factors measured by maturity models, they might achieve competitive parity but not a long-term competitive advantage. Wen and Qiang's (2016:113–126) research, that found that project management practices that fall into the category of organizational resources that can be imitated and whose maturity can help an organization catch up to its rivals may not always give them a competitive advantage, lends additional support to these conclusions.

Mittermaier and Steyn (2009:95-107) conducted a research study to assess the level of project management maturity within South African mining and engineering enterprises involved in the development of pilot plants. They observed that mining and engineering projects in South Africa weren't carried out in accordance with accepted standards and best practices for project management (Mittermaier & Steyn, 2009:88-107). As a result, initiatives were occasionally launched using erroneous projections and unlikely timelines. It was crucial that the organizations within the engineering and mining sectors matched their project maturity to the levels needed for more successful project delivery; given that those industries attracted significant capital expenditure for projects (Mittermaier & Steyn, 2009:99).

The study evaluated maturity based on the nine knowledge areas stated in the PMBOK, using the PMM maturity model developed by Project Management Solutions. According to the research methodology, which was based on the Delphi process, experts from various organizations first defined the required level of maturity before assessing the level of maturity that existed. The results of the study revealed a significant gap in the current degrees of maturity in eight of the nine knowledge domains.

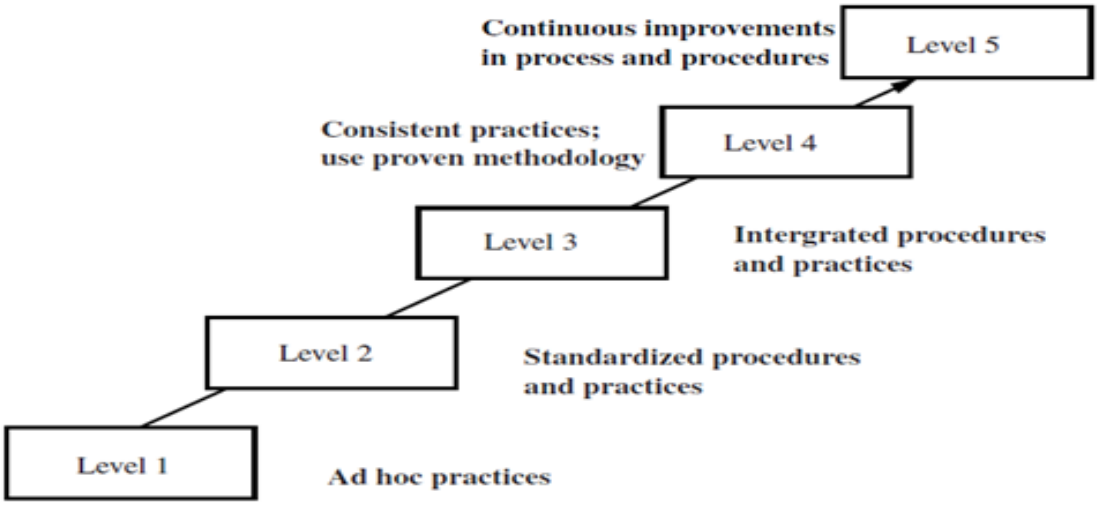
3.4 Project Management Maturity Models

Project Maturity Models are process models (measurement tools) created to evaluate the maturity of a company's (or a business unit's or department's) processes and practices, in order to pinpoint areas that need improvement and weaknesses (Yimam, 2011:44). According to (Cleland &

Ireland, 2002:80), Maturity models can also be used to guide improvement actions. The bulk of maturity models used today have their origins in quality management (Yimam, 2011:44). The idea is based on the quality paradigm put forward by Deming, Juran, and Crosby, which stated that “quality processes are the result of quality products” (Yimam, 2011:44). Additionally, there are differences amongst maturity models in terms of the ideas they represent and the suggestions they make for achieving maturity. Additionally, several PM maturity models may characterize and quantify maturity in different ways.

The majority of maturity models include a description of maturity levels, a model of the processes to be reviewed, assessment instruments, and a model that specifies the improvement path to the subsequent maturity level (Yimam, 2011:61-303). The behaviors or best practices that have been demonstrated in successful efforts are included in maturity models. Because of this, they frequently emphasize what businesses must do without specifying how or who must complete the actions (Yimam, 2011:61-303). According to Yimam, (2011:61-303) “A generic purpose of project management maturity models is to build a strategic plan for pushing project management ahead.” Most maturity models have adopted the CMM’s five stages of maturity, beginning at the lowest level of maturity, initial (Level 1), and concluding at the highest level of maturity, continuous improvement (Level 5). According to (Chrissis, Konrad, & Shrum, 2003) Crosby described a five-level scale in Quality Is Free, with "world-class” as level 5.

Figure 2.1: Five Levels of Maturity Model



Source: Yimam (2011:61)

It requires time and work to reach a higher degree of maturity, as well as the commitment of senior management (Yimam, 2011:62). Each organization should choose the maturity level that is most appropriate for its circumstances and work toward achieving it, rather than striving for the highest maturity level (Crawford, 2002:51). Crawford (2002) asserted that it is a bad (investment) and poor use of tools to try to increase one's maturity level only in order to reach a higher level. Instead of being done for one's individual profit, maturity evaluations should be done for the benefit of the business. In order to benefit from maturity, organizations should generally strive for continuous and consistent improvement, have strong executive management support for the process, emphasize best practices for project management, set measurable goals, implement changes gradually, conduct project management training, and foster knowledge sharing opportunities throughout the organization (Yimam, 2011:62).

Achieving (Level 2) repeatable/controlled level maturity can provide significant advantages for many firms, according to (Crawford, 2002:56). It needs to be emphasised that reaching a higher level of maturity does not mandate that a company should employ advanced tools and procedures all the time. Instead, the organization should still be able to apply lower level tools and techniques, depending on the difficulty and nature of each project (Yimam, 2011:62). At a higher maturity level, the organization has the authority to choose and employ the right PM methods, tactics, and tools (Kwak & Ibbs, 2002:150-155).

3.5 Project Maturity Models Review

3.5.1 Capacity Maturity Model Integration-CMMI

The CMMI model, which replaces the CMM model, is created by combining the best components of the several CMM disciplines (Software CMM, People CMM etc.). The best practices included in the model cover every stage of product creation, delivery, and maintenance. The approach also offers a basis for the addition of new bodies of knowledge (Chrissis et al., 2003:88).

CMMI's key objectives are:

- To Remove any discrepancies between the models and therefore minimize redundancy.
- To make the models easier and easy to integrate for multi-disciplinary organizations.
- To use uniform vocabulary, components, and style, to improve insight and understanding of project management maturity models.

Its objective is to give an effective and efficient single evaluation and improvement technique across organizational multi-process sectors, thus reducing the assessment and training expenses for companies associated to software (Vergopia, 2008:51). Additionally, it aims to help businesses in this sector create a unified vision for development (Vergopia, 2008:51). There are two versions of the CMMI model. These are continuous and staged representations.

3.5.1.1 The continuous representation CMMI mode version

Process improvement can be approached in a flexible way using continuous representation. It enables a business to focus on improving particular process areas (Vergopia, 2008:51). This makes it possible for a business to improve multiple processes at different rates. The improvement path through each process area is measured using capability levels ranging from not done to optimal process levels in continuous representation (Vergopia, 2008:51). The continuous representation of CMMI was chosen for this thesis. Hence further descriptions of the model are given for the continuous version (Vergopia, 2008:52). The majority of the descriptors, however, are also applicable to staged representation. The concept of institutionalisation is integrated into the CMMI concept of maturity (Yimam, 2011:63). In the context of the CMMI, institutionalisation means that the process must be embedded in the way work is done and that the correct procedure is followed consistently (Yimam, 2011:63).

Continuous representation of CMMI is used by organizations that want to improve the organizational elements that are most crucial for meeting their business requirements. This representation uses the CMMI continuous representation paradigm and specifies and arranges six capability levels by generic goals, which are then structured according to generic practices (Yimam, 2011:64). All of the process categories in CMMI are defined and organized according to Specific Goals and Practices. To achieve a given capability level in CMMI, a process area must achieve all of the process area's specific goals, as well as the general goals of the capability level it is striving for (Vergopia, 2008:51).

The adoption of generic techniques or acceptable alternatives is used to attain process capability levels. Except for the first, each of the six competency levels is defined by a single generic purpose (Vergopia, 2008:52). Each of the overarching objectives builds on the one before it. When the generic goals are used consecutively and in order, they show a process that is institutionalizing as it moves from merely being performed to being optimized (Yimam, 2011:64). The six capability levels outlined by CMMI are incomplete, performed, managed, specified, quantitatively managed, and optimizing of a process. The generic goal for each of the six competency levels is listed below,

along with a complete description of each level. Table 3.2 provides an overview of the model's description.

Capability Level 0: Incomplete Process

A "process that is unfinished" is one that has either not been completed or has been partially completed. This happens when one or more of the specific goals for the process area are not achieved (Yimam, 2011:65).

Generic Goal: There is no generic goal for this area

Capability Level 1: Performed Process

A process is done when it has finished the work that is necessary to generate the finished product. The objectives set forth for the process area are satisfied when the procedure is finished. At this level, accomplishing a process area's general aim is equivalent to accomplishing its specific goals (Yimam, 2011:65).

Generic Goal 1: To achieve the processes area's specific goals

Capability Level 2: Managed Process

A completed (capability level 1) procedure with the supporting infrastructure is referred to as a managed process. It adheres to policy, makes use of qualified personnel and appropriate resources to produce outputs that are regulated; involves pertinent stakeholders, is managed, reviewed, and monitored, and is assessed for adherence to its process description (Yimam, 2011:66). A key distinction between a performed and managed process is how much of the process is managed; and how much of it requires planning a regulated procedure and comparing its performance against the plan (Yimam, 2011:66). Corrective action is used when results and performance drastically diverge from the plan. The goals of the strategy are accomplished through a managed process that is institutionalized for reproducible outcomes (Yimam, 2011:66).

Generic Goal 2: Institutionalize a managed process

Capability Level 3: Defined Process

A defined process is a managed process that provides work deliverables, metrics, and other process improvement data to the organizational process assets; which is tailored from the

organization's set of standard processes, in accordance with the organization's tailoring criteria (Yimam, 2011:67). Standard processes provide descriptions of the essential process elements that are anticipated in specified procedures. A specified process clearly states the objective, inputs, entry criteria, activities, roles, metrics, verification methods, outputs, and exit criteria (Yimam, 2011:67).

A managed process can be distinguished from a defined process by the degree to which process descriptions, standards, and procedures are followed. A project, group, or organizational function has its own specialized process definitions, standards, and procedures (Yimam, 2011:66). Therefore, the regulated procedures for two projects within the same organization can be different. Another significant difference between controlled and defined processes is the extent to which they are declared and carried out. With a defined process, there is less variation in how procedures are carried out across the organization, and process assets, data, and learning may be successfully shared (Yimam, 2011:67). At this level, accomplishing a general objective for a process area is to oversee the processes that can then be customized to the project's requirements. The processes in the organization are now more consistently defined and applied, since they are based on organizational standards. Thus tailoring might not lead to any modifications to the standard procedure (Yimam, 2011:67).

Generic Goal 3: Institutionalize a defined process

A process that is defined and managed statistically makes use of statistical and other quantitative techniques. The elements of process performance, product quality, and service quality are measured and controlled throughout the project (Yimam, 2011:68). The sub processes that have a significant impact on the performance of the overall process are managed using statistics (Yimam, 2011:68). A specified process and a quantitatively managed process differ significantly in terms of the predictability of performance (Yimam, 2011:68). Only qualitative predictability can be obtained from described processes. However, quantitatively managed processes can yield quantitative predictability (Yimam, 2011:68).

Capability Level 4: Quantitatively Managed Process

Generic Goal 4: To institutionalize a quantitatively managed process

Capability Level 5: Optimizing Process

An optimizing process is a statistically managed process that is modified and changed to achieve current and future business objectives (Yimam, 2011:68). The goal of an optimizing process is to continuously improve process performance through making small, creative changes. Process innovations that significantly improve an organization's processes, as well as those that address the root causes of process variation, flaws, and other issues are found, reviewed, and implemented as appropriate (Yimam, 2011:68). These improvements are selected based on a quantitative analysis of their predicted contribution to achieving the organization's process improvement goals, in comparison to the cost and impact (Yimam, 2011:68).

A process that is optimizing instead of being quantitatively controlled constantly improves by addressing the common causes of process variance (Yimam, 2011:68). A statistically managed process is concentrated on addressing particular root causes of process variance and ensuring that the outcomes are statistically predictable (Yimam, 2011:69). Although the approach might produce predictable outcomes, they might not be sufficient to achieve the organization's process improvement objectives. When a process area reaches capacity level 5, it means that the chosen sub-processes have stabilized and that common sources of variation within that process are being addressed (Yimam, 2011:69). All processes could theoretically be upgraded to Level 5 but doing so would not be financially advantageous. Businesses should therefore concentrate on procedures that will enable them to accomplish their objectives (Yimam, 2011:69).

Generic Goal 5: Institutionalize an optimizing process

Table 3.2 below presents a summary of the continuous representation of the CMMI version.

Table 3.2: CMMI – The Continuous Representation: The Capability Levels

Level	Description	Generic Goals	Generic Practices
Level 0**:** Incomplete	Process is either not performed or partially performed.	NA	NA
Level 1: Performed.	Process is planned and executed in accordance with policy, monitored, controlled, and evaluated.	• Achieve Specific goals	• Perform base practices.
Level 2: Managed	Process standards and procedures are applicable to all projects throughout the organization.	• Establish organizational policy. • Plan the process. • Provide resources. • Assign responsibility. • Train people.	• Manage configurations. • Identify and involve relevant stakeholders. • Monitor and control the process. • Objectively verify adherence.

		• Perform managed process.	• Review status with management.
Level 3: Defined	Process standards and procedures are applicable to all projects throughout the organization.	• Institutionalize a defined Process.	• Establish a defined process. • Collect improvement information.
Level 4: Quantitatively Managed	Processes are controlled using statistical and other quantitative techniques.	• Institutionalize a quantitatively managed process.	• Establish quality objectives for the process. • Stabilize sub process performance.
Level 5: Optimizing	Processes are continuously improved through incremental and innovative technological Improvements.	• Institutionalize an optimizing Process.	• Ensure continuous process improvement. • Correct root causes of problems.

Source: Vergopia (2008:64)

3.5.1.2 The continuous representation CMMI mode version

By utilizing pre-established sets of process areas, the staged representation is a technique for establishing an organization's progress path. In this representation, process sections are grouped according to maturity levels, from the initial level to the ideal level (Vergopia, 2008:51). The staged representation defines an organization's improvement path by outlining the order in which each process area should be implemented at various maturity levels (Vergopia, 2008:51).

3.5.2 Organizational Project Management Maturity Model (OPM3)

The Organizational Project Management Maturity Model (OPM3) was created by the Project Management Institute (PMI) in 2013 as a tool for determining how mature an organization's project management practices are. This model transforms organizational enabling behaviors and other PMI fundamental criteria for project, program, and portfolio management into best practices that can be contrasted with a company's current procedures (Isaacs, 2018:29). This comparison to generally recognized best practices in the industry is intended to demonstrate how close a company currently is to achieving a particular best practice (Isaacs, 2018:29). According to PMI (2013:27), understanding the following two features of the OPM3 technique is required in order to identify and therefore raise an organization's maturity.

The OPM3 model is typically divided into:

- Project, program, and portfolio management, which are the three categories.
- In all three categories, best practices, capabilities, and outcomes are the three interrelated elements.
- Knowledge, assessment, and improvement are three general components.

- Standardize, Measure, Control, and Continuously Improve are the four stages of improvement (SMCI).

The three domains and four stages of progress in OPM3 can be used to evaluate organizational PM maturity. When evaluating OPM3's maturity, best practices within its domains are considered (Yimam, 2011:56). Indicators of key performance (KPI) are used to confirm the existence of best practices. In contrast with many other maturity models, OPM3 measures and reports maturity as percentages of best practice across all three components; rather than explicitly assigning a maturity level to a company (Yiman, 2011:56).

This model was designed:

- To assist enterprises in determining their project management maturity in comparison to industry best practices.
- To pinpoint specific areas that require improvement.
- To raise top management's knowledge of organizational maturity, and,
- To link organizational strategy to project accomplishment that is consistent and predictable.

3.5.2.1 OPM3 Best Practice

According to OPM3, a best practice is a currently accepted ideal way of reaching a specific purpose or target. The best practices for OPM3 can be divided into two categories:

- SMCI best practices – those that are relevant to standardize, measure, control, and constantly improve stages of process improvement (Yimam, 2011:56).
- Best practices that support the adoption of SMCI best practices and the long-term sustainability of organizational transformation, which are referred to as organizational enabler best practices (Yimam, 2011:56).

Utilizing OPM3, one may assess an organization's maturity by looking for the presence of best practices (PMI, 2013:29). Each best practice comprises a number of capabilities, each of which is made up of a number of results. An organization is given a capability if it can demonstrate one or more of the associated consequences of that competence through tangible or intangible evidence (Isaac, 2018:29). An organization has achieved best practice if it has demonstrated that it is capable of executing all of its requirements (Isaac, 2018: 29). (Yimam, 2011:57) asserted that an organization exhibits consistent corporate PM processes, as demonstrated by aggregated

capabilities and successful outputs, when applying OPM3. When each of the capabilities listed for a best practice are present, it is widely accepted that it exists.

3.5.2.2 OPM3 Capabilities

OPM3 defines capability as a specific area of knowledge required in an organization, in order to carry out project management operations (Yimam, 2011:57). Capabilities are incremental steps that help one or best practices to be attained (Yimam, 2011:57). The presence of specialized capacity is a factor used in OPM3 to gauge organizational maturity. A capability is considered to exist when all of the results connected to it have been noticed (Yimam, 2011:57). A company's ability to complete projects is influenced by its use of technology, human resources, and project management techniques (Isaac, 2018:30). Before an organization is permitted to use a best practice, it must possess all of the capabilities that make up that best practice (PMI, 2013: 30).

3.5.2.3 OPM3 Outcome

A measurable outcome of using a capacity is what OPM3 refers to as an outcome. In the model, an outcome can be demonstrated as having been attained through observation, documentation, or any other means (Yimam, 2011:57). KPIs are frequently used to assess the degree to which a result occurs, as well as whether it exists at all. To prove that it has a given capacity, an organization must exhibit one or more of the resulting outcomes. This evidence could be physical or intangible, for example. A project management policy is used as an example of a tangible outcome by PMI (2013:30) and verbal acceptance of project management is used as an example of an intangible outcome.

3.5.2.4 OPM3 Domains and Process Improvement Stages

OPM3 domains are what PMI refers to as portfolio, program, and project management, as well as the associated process-based standards. These principles serve as the cornerstone for best practices that are used to gauge the maturity of an organization (PMI, 2013:30). Phases of process improvement are used to add a quality dimension to the OPM3 process. The SMCI steps stand for standardize, measure, control, and improve (PMI, 2013:34-35).

- Standardize – the process of writing down a method so that it may be used repeatedly and distributed across an organization, ensuring consistency when implementing a best practice (Isaac, 2018:30).
- Measure – is the technique of determining a process's performance by quantifying its outputs (Isaac, 2018:30).

- Control – comprises measuring how a process is performing in comparison to how it should be performing, examining any variations, and taking corrective action to get the process back into acceptable control parameters (Isaac, 2018:30).
- Improve – resulting in a process that is constantly evaluated and improved.

3.5.2.5 OPM3 Organizational Enablers and Categorisation

A group of best practices in OPM3 called organizational enablers (OE) identify and evaluate the maturity of general management practices that an organization should have, in order to successfully adopt organizational project management. These are influenced by company culture, structure, technology, and human resource management procedures (PMI, 2013:36). OPM3 categorizes its best practices into 9 categories to help organizations to spot areas for improvement more easily. The categories are:

- Domain.
- Process improvement stage (SMCI).
- Organizational enabler (OE).
- Process Group.
- Performance Domain.
- Knowledge area.
- Project predictability.
- Resource optimization.
- Balanced scorecard.

3.5.2.6 OPM3 Framework

An organization may utilize the OPM3 framework as a tool to help with the evaluation process (Isaacs, 2018:31). The framework's knowledge categories and cycle components, which comprise inputs, tools & procedures, and outputs, are in line with OPM3 processes (PMI, 2013:40).

3.5.2.6 Areas of Expertise and Cycle Elements

Before the OPM3 evaluation process can start, three areas of knowledge and abilities are defined by categories of competency (Isaacs, 2018:31). According to (PMI, 2013:41) these three areas are:

- Governance, Risk and Compliance (GRC).
- Delivery and Benefits Management.
- Organizational change.

The OPM3 cycle has three parts: Acquire Knowledge, Perform Assessment, and Manage Improvements. Each of these components lists the steps necessary to carry out the OPM3 program. Table 3.3 below provides a description of each element and the related processes in accordance with Isaacs (2018:32).

Table 3.3: OPM3 Cycle Element 1- Acquire Knowledge

Process 1	Understand OPM3	Learn about OPM3 and the benefits it will bring to your company.
Process 2	Define Outcomes	Understand the organization's motivation for implementing the OPM3 process, as well as the expected business outcomes.
Process 3	Asses Change Readiness	Assess the organization's readiness for change, as well as any potential hurdles that may prevent any improvement initiatives from being implemented.

Source: Isaac, 2018:32.

Isaacs (2018:32) asserted that the Acquire Knowledge Element, as shown in Table 3.4, requires that an organization confirms that it has followed the three steps to make sure that the goals for carrying out an OPM3 assessment are clear and that any potential risks are discovered at an early stage (PMI, 2013:43-44).

Table 3.4: Cycle Element 2 – Perform Assessment

Phase 1	Establish Plan	This phase entails developing a project plan for implementing the OPM3 program using the PMBOK Guide.
Phase 2	Define Scope	The objectives, resources used, and acceptance criteria are all clearly defined in a thorough statement of work.
Phase 3	Conduct Assessment	The OPM3 evaluation is carried out in accordance with the plan and scope established in Phases 1 and 2.
Phase 4	Initiate Assessment	The company starts a change management process to guarantee that the suggested improvement efforts are implemented across the board.

Source: Isaac (2018:32)

Isaacs (2018:32) stated that after acquiring the necessary knowledge, the organization is ready to begin the evaluation process, which is divided into four phases, as shown in Table 3.5 below (PMI, 2013:44-45). Managing the OPM3 program as a project is one of the crucial steps that results in effective implementation, according to PMI (2013:41).

Table 3.5: Cycle Element 3 – Manage Improvement

Phase 1	Measure Results	Compares the anticipated business results from the planning phase to the actual assessment results.
Phase 2	Create Recommendations	The gap between the organization's desired states of organizational project management and current states is examined, and recommendations are made to help the organization to achieve its goals.
Phase 3	Select Initiatives	For decision-making purposes, a list of possible projects is produced and given to the appropriate parties.
Phase 4	Implement Improvement Initiatives	During phase 3 (choose initiatives), the improvement initiatives chosen by the organization's stakeholders are turned into projects, programs, and portfolios, which are subsequently implemented.
Phase 5	Manage Change	The launched change management process is managed to ensure that the targeted business outcomes are attained.

Source: Isaac (2018:33)

To locate, choose, and implement improvement activities based on the OPM3 evaluation, five procedures are involved in managing improvements (PMI, 2013:45–46).

3.5.3 Portfolio, Program & Project Management Maturity (P3M3)

The portfolio, program, and project management maturity model (P3M3) was developed by the Office of Government Commerce in the UK in 2006. The P3M3 model was created in response to a need to close the gap between corporate strategy and successful initiatives (Bogopa, 2019:30). The P3M3 is a maturity model for organizations that evaluates how projects, programs, and portfolios are managed. P3M3® can be customized to meet the demands of the organization. P3M3 is divided into three sub-models: portfolio, program, and project management (PfM3, PgM3, and PjM3, respectively) (Bogopa, 2019:32).

A framework with five levels is also used to define the P3M3 Maturity Model:

1: Awareness of process.
2: Repeatable process.
3: Defined process.
4: Managed process.
5: Optimized process.

The P3M3 maturity level is defined by the five levels of maturity frameworks listed in Table 3.6 below (Warrilow, 2009:90; Silvius et al., 2017:68; Tahri & Drissi-Kaitouni, 2015:171-177), just like the CMMI.

Table 3.6: Levels of maturity frameworks of P3M3

I	**Awareness**	Most organizations undertake initiatives and programs with little or no planning and little management at the awareness level. Without a defined method, the organization can deliver projects, but there is a high risk of project delays. Other organizations in this stage of development rely on individual experience to survive and complete projects.
II	**Repeatable**	At this level, an organization understands project management, but the PM lacks a standardization platform, resulting in project failure. Project and/or program planning and control are still separated. Project management is still in its early stages.
III	**Defined**	The organization now has guidelines in place that may be utilized to guide a project or program. Additionally, previous project performance data or information is available, which can be leveraged to reduce delays and cost overruns.
IIII	**Managed**	The organization removes any barriers to effective project outcomes and actively improves team members' skills, such as negotiation and dispute resolution. The organization must improve its ability to foresee outcomes.
V	**Optimised**	Finally, the company demonstrates that it has advanced to a higher degree of project management practice and discovery. A higher level of success is a property of optimization. The outcomes in terms of cost, time, and quality are all optimized.

Source: Silvius et al. (2017)

The model follows the PMBOK guidelines. The P3M3 explains portfolio, program, and project-related activities, as well as the essential processes that affect project outcomes. The maturity model provides for independent project, program, and portfolio evaluation (Young, Young & Romero Zapata, 2014:215-230). P3M3 is a sub-maturity model created from the CMMI model, with three levels of maturity, namely:

- PfM3_Portfolio Management Maturity Model
- PgM3_Programme Management Maturity Model
- PjM3_Project Management Maturity Model.

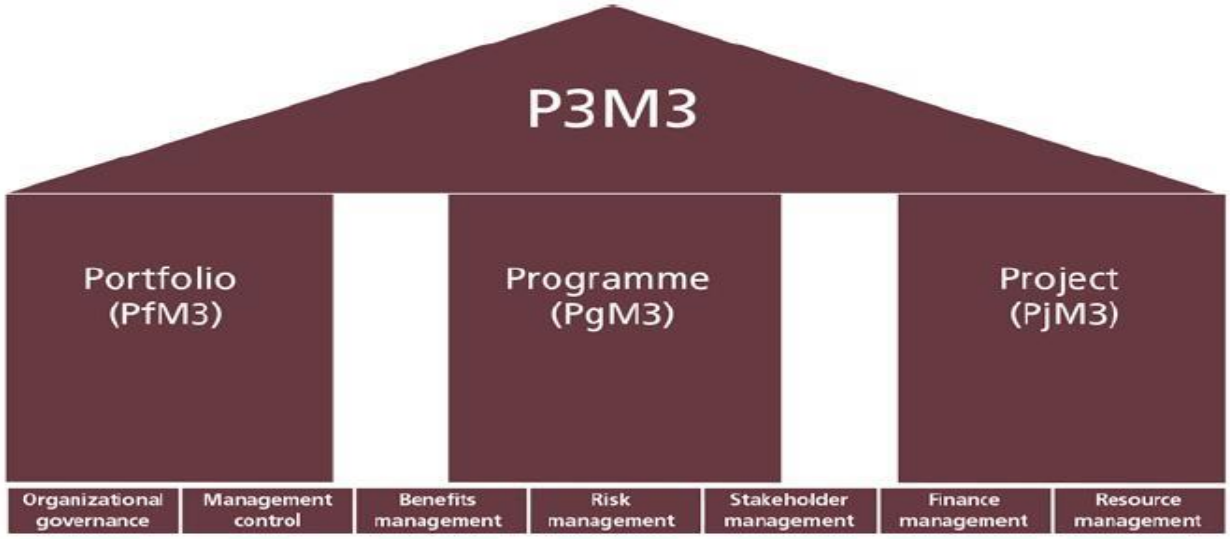
P3M3 promotes independent evaluation of its maturity models and contends that a business may be exceptional at both portfolio management and project management, if not both. P3M3 evaluates an organization's performance in all three models using the following seven essential management viewpoints (Silvius, Schipper, Planko & van den Brink, 2017:85; Young et al., 2014:215-230):

- Organizational governance.
- Management control.
- Benefits management.
- Risk management.
- Stakeholder management.
- Finance management.

- Resource management.

Based on the maturity level that an organization demonstrates in any of the three P3M3 sub-maturity models, performance outcomes are determined. If improvement is required, the maturity assessment procedure will be followed. Figure 3.2 below shows the relationship between the 3-sub maturity model and the previously mentioned seven crucial areas.

Figure 3.2: Project, Program and Portfolio Management Maturity Model



Source: OGC, (2011)

P3M3 is a model for project management maturity that comprises 42 KPIs (KPIs). An organization that has attained P3M3 maturity levels 4-5 can reach different maturity levels when assessed using other maturity models. Moving up a level in the P3M3 takes, on average, 18 months, according to KPMG (2013). Similarly to other maturity models, P3M3 offers a high rate of return on investment (ROI), lower costs, more customer satisfaction, increased employee morale, and superior overall project quality (Young et al., 2014:215-230).

3.5.4 Project Management Process Maturity Model (PM2)

One of the earliest PM maturity models to be developed is PM2. Similarly to the CMM paradigm, the PM2 model contains five stages of maturity, albeit that the terminology is different. The model divides PM processes and practices into eight PM knowledge domains and six phases of PM processes, using the PMBOK's division (Yimam, 2011:51). These knowledge categories and phases are evaluated as part of the approach's assessment of an organization's PM maturity (Yimam, 2011:52).

Kwak and Ibbs (2000: 32–34) developed the Project Management Process Maturity Model (PM2), as well as an analysis methodology for evaluating an organization's project management practices. The creation of PM2 was influenced by the quality principles of Crosby and Deming; specifically being Deming's methods for enhancing quality management systems and Crosby's five phases for bringing quality into an organization (Kwak & Ibbs, 2002:150). The authors evaluated organizational maturity levels using the PM2 Maturity Model as an assessment method. It depicts a series of steps that must be taken in order to improve overall PM effectiveness (Vergopia, 2008:58). The model divides the project management processes and practices into six process stages (initiate, plan, execute, control, closure, and project-driven organization) and eight knowledge domains (scope, time, money, quality, human resources, communication, risk, and procurement) (Vergopia, 2008:58). The model isn't limited to one industry. The model aids organizations with determining their current maturity level and the processes and requirements they will need to achieve greater levels of maturity (Vergopia, 2008:58).

The PM2 Maturity Model is one of the earliest models that made CMM a paradigm that could be used in any project management business; instead of just being a software development paradigm. The authors also laid the foundation for further investigation into the connection between project performance and project management maturity. With 148 questions spanning eight key Project Management knowledge areas and six process phases, their evaluation instrument is pretty extensive. Like other general models, this one does not offer explicit instructions for advancing a Project Management process from one maturity level to another.

Table 3.7: PM2 Maturity Model's Summary

Maturity Level	Key PM Process	Major Organizational Characteristics	Key Focus Area
Level 1 (Ad-Hoc Level)	There are no consistent PM processes or techniques. There is no uniform collection or analysis of PM data.	Isolated functionally. Senior managerial support is lacking. Individual contributions are crucial to the project's success.	Basic PM processes should be understood and established.
Level 2 (Planned Level)	Processes for informal PM are defined. Informal PM issues are discovered. PM data is gathered informally.	Level 2 (Planned Level)	Processes for informal PM are defined. Informal PM issues are discovered. PM data is gathered informally.

Level 3 (Managed at Project Level)	There is a formal project planning and control structure in place. Formal PM data is kept track of.	Team oriented (medium). PM skills and techniques are taught informally.	Individual project planning and control that is systematic and structured.
Level 4 (Managed at Corporate Level)	Multiple PM (program Management). Data and processes related to PM are integrated. Data is objectively examined, measured, and saved in PM processes.	Strong collaboration Formal project management training for the project team.	Multiple project planning and management in a professional manner.
Level 5 (Continuous Learning)	Processes for project management are always being improved. The PM processes have been thoroughly examined. The data on PMs has been optimized and is being maintained.	Organization focused on projects organization that is dynamic, energetic, and fluid. PM methods and practices are always being improved.	Innovative PM process and practice improvements.

Source: Yimam (2011:52)

PM2 Maturity Model Objectives are:

- To give managers a mechanism to evaluate the contribution a project management process makes to the organization.
- To give businesses in any industry a way to evaluate the advantages of adopting project management.
- To develop a mechanism for assessing the existing state of PM practices and procedures quantitatively.
- To assess the financial and organizational impact of project management on a company.

3.6 Limitations of Project Management Maturity

Businesses must recognize that reaching maturity may not necessarily result in an increase in project management proficiency or project success (Ives, 2005:37). Although maturity assessments can help uncover problem areas, choosing and implementing the right improvement projects is just as important (Fernandes et al., 2014:81-108; Wen & Qiang, 2016:113-126). Backlund et al. (2014:837-838) carried out a study to determine how maturity models were used by businesses and what advantages they received from them. Their findings showed that there

was research on how firms used maturity model data to improve project management process performance. Mir and Pinnington's (2014:202-217) study, contended that there was no measurable evidence to support the value of project management methodologies, despite their rising use, which supports Backlund et al (2014:837-846) study.

Although research suggests that project management maturity as evaluated by many of today's maturity models may not be the primary element determining project performance, project management maturity has become a popular belief among practitioners (Pretorius et al., 2012:1-12; Labuschagne & Marnewick, 2008:32; Sonnekus & Labuschagne, 2003:9-25). A 14 percent correlation between maturity and success was shown by Besner and Hobbs (2013:20), thus demonstrating that maturity does influence success, but that there are undoubtedly other aspects in play as well. According to several studies, more research is required to examine the use of maturity models and maturity assessment in various enterprises carrying out various types of projects; which will aid in broadening our perspective and comprehension of the subject (Pasian et.al, 2012:154).

Backlund et al. (2014:837-846) brought up a few potential problems that Jugdev and Thomas (2002: 4-14) found with maturity model adoption. They are:

- Given the subjective nature of maturity level measurement, finding a tool with a track record of consistent use is problematic.
- Maturity models do not account for the intangible or soft aspects of project management which may help an individual to develop more mature competence.
- Lack of adaptability when dealing with change.
- Problem areas are identified but not resolved; once a problem area has been identified, the organization must develop and carry out its own plans to deal with it.
- The maturity levels don't offer enough detail to chart development over time.

The use of project management maturity models to evaluate project management competencies inside businesses that undertook projects with ambiguous goals was examined by Pasian (2012: 146–157). The findings confirmed some of the drawbacks of PM maturity models cited by Backlund et al. (2014: 837-846); including the possibility that other aspects of an organization's PM competence that are not assessed by conventional PM maturity models may contribute to that capability. Pasian's (2012:150-155) study concentrated on e-learning courses that she found lacked distinct goals.

The results of this study indicate that an organization's capacity for project management is significantly influenced by its capacity to adjust to shifting cultural norms and environmental conditions, as well as by individual factors such as stakeholder attitude and motivation, and by its capacity to create processes that are specific to its project environment (Isaac, 2018:43). Several of Pasian's (2012:150-155) findings are corroborated by Konstantinou's (2015:21-35) in-depth interviews with highly successful project managers. The situational information that project managers acquired while working for their organizations, as well as a variety of discursive skills, including teamwork and a keen attention to customer needs, all contributed to their success.

The relevance of the setting in which project management is carried out; how It can have a substantial impact on how maturity is measured and advanced within that context were also addressed by Pasian (2012:150–155). Organizations must make sure their project management methodology is compatible with their surroundings (Ives, 2005:37-50). Besner and Hobbs (2013:17-34) explored the variations in PM practice across settings and developed the concept of "performing-maturity" which was proved to be a valuable tool for finding contextual variations, as well as best practices. Project management maturity, an organizations support for PM tools and techniques, the presence of qualified project personnel, and each respondent's perception of project success are all aspects that were evaluated in this concept (Isaac, 2018:44).

Surprisingly, Aubry's (2015:19–45) research found that project management maturity was directly and positively impacted by the supportive roles that project management offices and organizations played. This highlights the significance of having "organizational" support for PM tools and practices 'within the framework of the "performance maturity" notion proposed by Besner and Hobbs (2013:17-34). However, the analysis also confirmed that some techniques were more frequently used in one environment rather than in another. Besner and Hobbs (2013:17-34) established a list of general project management behaviours and tools that were ubiquitous across contexts.

This seems to imply that, depending on the specific organization or project setting, the level of process maturity, as defined by various maturity models may vary. Research by Wen and Qiang (2016:113-126) supported the idea that a company's maturity assessment is very situation-specific. They looked at how organizational enablers affected the use of organizational project management (OPM) in the Chinese context. Organizational enablers (OE) are the driving force behind the successful execution of project, program, and portfolio management, and are essential

tools for ensuring that an organization achieves its strategic objectives (Wen & Qiang, 2016:113-126; PMI, 2013:4-6).

Table 3.8: Organizational Enablers for Project Management

Categories of Organizational Enablers	Organizational Enablers per Category
Standardized supporting factors	• Typical project approval procedure. • Process for appointing a project manager. • Standard Baseline for project planning. • Standard management techniques. • Process for standard performance benchmarking and improvement. • Technical specification guidance. • Corporate knowledge base. • Estimating templates and tools.
Well defined responsibility system	• The steering group provides support and guidance. • Strong project sponsorship. • Providing project managers with sufficient authority. • Project and functional managers have clearly defined lines of power. • Team members responsibilities are well specified.
Mature organization structure	• Team members work well together. • Technical resources from several functional groups are available. • Functional groupings cooperation and support. • Participation of the entire team in problem-solving. • Team members can report to both functional and project managers using this efficient system.

Source: Wen and Qiang (2016:113-126)

In order to identify the OE in the Chinese context, Wen and Qiang (2016:113–126) developed a model that divided organizational enablers into nine categories, based on project, program, and portfolio management. Table 3.8 above, which lists each category and the enablers connected to it, summarizes the three types of organizational enablers for project management that Wen and Qiang (2016:113-126) identified. The relationship to Besner and Hobbs' (2013:17-34) model is evident when examining the facilitators in the table above. In particular, the effectiveness of an organization's project management support system appears to be crucial for increasing its ability to complete projects successfully (Isaac, 2018:45).

3.7 Chapter Summary

All of the above studies demonstrate that a more comprehensive approach is necessary for a company to increase its capacity to successfully complete projects. This strategy should take into account advancing the maturity of project management processes, thus ensuring that the organizational environment is favourable and supportive of PM, as well as cultivating and retaining project talent (Fernandes et al., 2014:81-108).

CHAPTER FOUR:
RESEARCH DESIGN AND METHODOLOGY

4.1 Introduction

The research methodology supporting this study, consists of the study population, population sampling, data collection, data analysis, and research design, described in this chapter. The chapter also contains the study objectives, research questions, and ethical concerns. Gupta et al (2019:274-285) stated that research is a strategy for understanding any concept, topic, or procedure. It is a rigorous, in-depth investigation into a topic with the goal of discovering new information and developing understanding of the topic under review. The research process comprises of collecting, analysis, and application of facts, data, and statistics pertaining to improvement.

In order to find solutions to the issues that concern project managers, a number of coordinated and carried out procedures make up the research process. The first step in the research process is to identify the problems in organizations and identify the issues that need to be addressed. Once the problem is clearly defined, the researcher can proceed to identify the factors involved, collect data, study the information, clarify the existing situation, and finally resolve it by implementing necessary corrective actions.

4.2 Research Objectives

The researcher's expectations while starting the study process are known as research objectives. These are either directly connected to the problem statement or result from it, which emphasises the study gap that has to be addressed. The two categories of research objectives for this study are the primary research objectives and the secondary research objectives. The primary research goal of the project is the major research objective.

4.2.1 Primary Research Objective

- To examine the link between Project Management maturity and project success.

4.2.2 Secondary Research Objectives

- Examining the existing Project Management maturity models available to businesses.

4.3 Research Question

The research question arises out of the literature review and is a crucial component of the study. It seeks to support the problem statement's research objectives, and comprises a principal research question and several supporting questions.

4.3.1 Main Research Question

- What is the correlation between Project Management maturity and project Execution success?

4.3.2 Sub-Research Question.

- What Project maturity models are currently available to organizations?

4.4 Research Design and Research Methodology

The research design and the research methodology are described in detail below.

4.4.1 Research Design

Research design, in the words of Kumar (2011:95–96), is a strategy for addressing questions or issues in the field of study. It is a process plan that researchers use to respond to explain how the researcher intends to go about gathering the necessary data, followed by analysing it in order to reach conclusions and thereby answer the research question. The study's design, includes methodologies that are both cost-effective and relevant to the research, and establishes the parameters for data collecting and analysis. Sithole's (2021:68) citation of Kothari (2004:31), stated that a research design describes the strategy used for data collection, measurement, and analysis. It also serves as the conceptual framework for the study.

Kumar (2015:16), stated that an effective research design ensures that the study is capable of bringing answers to the research challenge. Mafuwane (2012:68) averred that a research design acts as a bridge between the practical application of the proposed research approach and the research questions. Interpreting the data and, then addressing the study's research challenge will depend on the research design. It will speak to the procedures the researcher should follow to guarantee the validity and reliability of the study's findings (Sithole, 2021:68).

4.4.2 Research Methodology

Sithole (2021:70), states that research methodology is a group of systematic research techniques. It requires putting together a research plan and explain how the plan will be carried out. Research

methodology clarifies assumptions and results, identifies constraints and resources, and defines and analyses techniques.

The development of research questions, research objectives, the research equipment needed, data collection, data analysis, and reporting are all aspects of research technique. Research methodology is the process of developing research design endeavours. As shown in Table 4.1 below, the distinction between these two notions is made clear (Jowah, 2012:73).

Table 4.1: Differences between research design and research methodology

Research Design	Research Methodology
The way to be walked is highlighted.	The method of walking is highlighted.
The emphasis is on the intended outcomes.	Results-oriented tools and strategies are emphasized.
It depicts the entire picture.	The emphasis is on procedures and processes.
Is one unit inseparable from another?	The emphasis is on "how should it be done".

Source: Jowah (2012:73)

This study used a mixed-methods approach, with questionnaires gathering both qualitative and quantitative data (Cameron et al., 2015:90-104). The most popular method of data collection is a quantitative approach. To gain a deeper knowledge of the connection between project maturity and successful project execution, qualitative questions were used. These questions assisted with minimizing any nuisance variables, thus increasing the researches validity (Welman et al., 2005:81-85). A research might be qualitative or quantitative, or a combination of both. When logical approaches are used to create a relationship between information gathered and perception, a qualitative research design is commonly used.

The approach is more appropriate when the research goal is to answer why a particular concept persists, as well as what the participants views on the subject being discussed are (Kennedy & Black, 2013:272).Quantitative research design is frequently used in instances when the researcher seeks to obtain information by quantitative means (Williams, 2021:01). In most of these types of studies the researcher asks respondents to fill out questionnaires.

4.4.3 Advantages of mixed-method Research

- It aids in deciphering any inconsistencies between qualitative and quantitative results.
- The qualitative part of the study offers the researcher results that are based on personal experience.
- The methodology supports the formation of multi-disciplinary teams by allowing academic discussion on two different ideas.
- It offers a lot of flexibility because it can incorporate several different research paradigms into one study.
- It reflects on human being'' natural manner of gathering data and knowledge for the development of beliefs and culture.

4.4.4 Types of methods of research

The qualitative and quantitative research approaches are both covered in the research literature. Even though qualitative and quantitative research have significant differences, they sometimes work well together.

Table 4.2: Differences of quantitative and qualitative research

Criteria	Qualitative Research	Quantitative Research
Purpose	To interpret and comprehend social interactions.	To put hypotheses to the test, examine cause and effect, and make predictions.
Group Studied	Smaller and not chosen at random.	Larger and chosen at random.
Variables	Study of the whole, not variables.	Variables that were investigated.
Type of Data Collected	Words, image, or objects.	Numbers and statistics.
Form of Data Collected	Open-ended responses, interviews, participant observations, field notes, and reflections are all examples of qualitative data.	Quantitative data collected with structured and approved data collection instruments.
Type of Data Analysis	Identify patterns, characteristics, and themes.	Identify statistical relationships.

Objectivity and Subjectivity	Subjectivity should be expected.	Objectivity is critical.
Role of Researcher	Participants in the study may be aware of the researcher and of the possibility of him being biased, and likewise, the researcher may be aware of participants' possible bias.	Participants in the study are unaware of the researcher's biases, and participants' characteristics are purposely kept from the researcher (double blind studies).
Results	Findings are more specific or specialized and are less generalizable.	Findings that can be applied to different populations are generalizable.
Scientific Method	Exploratory or bottom–up research: the researcher develops a new hypothesis and theory based on the information gathered.	Confirmatory or top-down research: the researcher uses data to test the hypothesis and theory.
View of Human Behaviour	Dynamic, situational, social, and personal.	Regular and predictable.
Most Common Research Objectives	Explore, discover, and construct.	Describe, explain and predict.
Focus	Wide-angle lens that looks at the scope and depth of phenomena.	Narrow-angle lens; tests a specific hypothesis.
Nature of Observation	Investigates behaviour in a natural setting.	Investigates behaviour under controlled circumstances to determine causal consequences.
Nature of Reality	Multiple realities; subjective.	Single reality; objective.
Final Report	Narrative report includes background information and first-hand quotes from study participants.	Correlations, mean comparisons, and statistics are included in statistical reports.

Source: Adapted from Lichtman (2006:7-8)

Mixed method research refers to the process of combining quantitative and qualitative research procedures so as to benefit from both perspectives. Quantitative research conveys statistics, whereas qualitative research reveals the characteristics or traits of something, so mixed methods research benefit from the combination because it can study research issues using a variety of techniques and so transcend the limitations of a single concept (Creswell et.al, 2003:209-240). Approaches to quantitative research was used by the researcher. Sibinga (2018:182) described quantitative research as "the type of research that explains phenomena by gathering numerical data and analysing them using mathematically based procedures". Quantitative research, in its most basic form, uses statistics to analyse and present study findings. Working with numbers and statistics is a requirement of quantitative research. Because the research benefited from both

qualitative and quantitative data collection methods, the researcher was able derive information from both sources.

The researcher believed that combining the two procedures would help to maximize the benefits of each. According to Perrin (2016:85), qualitative research uses unstructured evidence and data to investigate human behaviour and seek knowledge that can gain a better understanding of human experiences.

4.5 Target Population

Project practitioners in the municipality who are routinely and directly associated with projects were the study's target population. This included project managers, project administrators, project team members and IT Technicians these were all internal stakeholders involved directly with project execution. Thus they could convey the lived experiences of failed and successful projects they have been involved in and can state or analyse the organizations' project maturity levels. It was estimated that there are 550 project practitioners in this category in the various municipal departments. The participants were individuals who dealt with the day to day implementation of projects within the municipality.

4.5.1 Sampling method

The prospective respondents were scattered throughout the municipality and work in environments with other people who are not involved with projects. Consequently random sampling would include too many other people not related to project execution in the system. Therefore, the researcher opted for purposive sampling (judgemental sampling) because the individual prospective respondents were drawn from among the employees in general.

According to Cooper and Schindler (2011:151), purposeful sampling is the deliberate selection of specific participants to participate in the study. Thus only those involved in the execution of projects were handpicked to respond to the questionnaires.

4.5.2 Sample Size and Sample Frame

The sample frame was estimated at 500, Onwuegbuzie (2007:238-254) stated that 10 percent of a representative sample is large enough to allow for generalisation to the entire population. The researcher opted to use 20% (100) of the sample frame; since the larger the sample the more likely it is that results will be accurate. Besides, the respondents are accessible, both physically and economically.

4.6 The Research Instrument

Questionnaires is one of the most popular ways to gather data in quantitative research, were used to collect the data for this study. A research questionnaire can be defined as a set of questions that are structured to elicit valid response from respondents (Patten, 2016:23). The main purpose of questionnaire is to elicit the response from the respondents on the specific topic, since the main aim of quantitative research is usually generalizing the findings and ensuring replication of the findings with previous research studies (Yin, 2017:3). Questionnaire are standardized and structured for this purpose. In addition, questionnaires are usually self-administered by the researcher, for this study. The questionnaire was self-administered by the researcher (Bulmer, 2017:17).

The three (3) components of the questionnaire were Sections A, B, and C.

Section A is the biography - This was to learn more about the responders so that those who didn't meet the requirements could be taken out of the analysis.

Section B was the Likert scale - This scale examined the respondent'' perceptions, experiences, and comprehension of the assessments of project management maturity on effective project execution in a Western Cape municipality. A scale of 1 to 5 was used, where 1 represents strongly disagree, 2 disagree, 3 neutral, 4 agree, and 5 strongly agree.

Section C was open-ended - Respondents had the option to provide at least five points to answer each of the two questions in this area.

4.6.1 Benefits of the questionnaire approach

Table 4.3: Advantages and disadvantages of using questionnaires in surveys

Advantages	Disadvantage
Even when the sample is huge and geographically dispersed, the cost is modest.	Low return rate of completed questionnaires; no-response bias is often unclear.
It is free of the interviewer's bias; responses are given in the respondent'' own words.	It can only be used when respondents are well-informed and cooperative.
Respondents have enough time to provide thoughtful responses.	Once the questionnaire is sent, you may lose control over it.
Large samples can be used to improve the consistency and reliability of the results.	Because it's impossible to change the method once the questionnaires have been sent out, there's an inherent inflexibility.

Source: Kothari (2004:100-101)

4.7 Data Collection Technique

Data collection, according to Creswell (2013:9), is the process of locating and choosing study participants, obtaining their agreement and gathering information by asking them questions or observing their behaviour. Kothari (2004:95) defined data collection as the process of gathering facts from reliable sources in order to address the research problem, support the hypothesis, and validate the findings. To gather the data, a structured questionnaire was used. In order to collect all of the demographic data for this study from the people involved, the questionnaire was properly developed in three sections: a biography (multiple choice), Likert scale questions, and open-ended comments. The data gathering for the project took place in a municipality in the Western Cape. Because the researcher was in control of the fieldwork and no helpers were required and no assistant was required.

4.8 Data Coding and Analysis

Data capturing was done manually using the Spreadsheets analysis tool and Statistical Package for the Social Sciences (SPSS). Data coding, according to Charmaz (2006:45), is the crucial link between collecting data and deciphering its meaning. According to Smith and Davies (2010:156), data coding doesn't establish the completeness of data analysis. Rather it is a strategy for putting data in order so that the researcher may understand the main signals given by the data. According to theoretical concepts, the process of studying and comprehending data is largely based on them (Tolley et al, 2016:6). This study analysed the data collected from the questionnaire using both descriptive and inferential statistics. In inferential statistics the researcher takes data from samples and make generalizations about a population (Sanders et al., 2019:4).

4.9 Ethical Considerations

In everyday studies, research ethics is critical since it allows academics to protect the integrity of their subjects while also revealing examined facts (Emanuel, Abdoler & Stunkel, 2016:1-19). The ethical norms of research will be recognized throughout the data collection process for this project. This includes obtaining informed consent from participants; otherwise, research on a specific subject could be damaging to the individuals. As a result, the study maintained confidentiality and the participant’s identities remained secret. The study also used pseudonyms to ensure that the identity of the researcher was not revealed during data analysis. Volunteers were given a consent form to sign and were given the option to withdraw from the study if they felt uncomfortable. Proof

of the authenticity of the research and the subject were provided by a letter from the Cape Peninsula University of Technology's Higher Degree Committee (HDC).

4.10 Limitations of the Research

This section covered the municipality in Western Cape Province, a department of the local government. The study was done at the address given because it is where the researcher lives. The researcher benefited from this in terms of convenience and increased understanding because the study topic will be applied in the workplace. The results of the study are applicable only to the area of study.

4.11 Chapter Summary

Although there may be some subjective challenges with qualitative research, the choice to use a combination of research methods was deliberate. Other worries that the researcher had not anticipated were disclosed by the respondent’s willingness to be transparent. This study projects dependability and validity should be assessed in an environment where tasks are diligently carried out according to plan. Included in this are the study's introduction, a review of the relevant literature, the discovery of the study gap and subsequent comprehension of the problem statement, the context of the objectives, the research questions, the decision to use mixed methods, the identification of the target population, the development and testing of the questionnaires, the data collection techniques (questionnaires), and data analysis using Excel or SPSS.

CHAPTER FIVE:
DATA ANALYSIS, FINDINGS AND INTERPRETATION

5.1 Introduction

The study's fieldwork results are presented and evaluated in this chapter according to the guidelines laid out in the research methodology chapter. Information was gathered using a structured questionnaire that included both closed ended (quantitative) and open-ended (qualitative) items.

Project success and maturity in project management have a known link, which typically leads to effective project execution. The relationship between project management maturity and project success as it relates to successful project execution will be the study's main focus. A measure of how well an organization's project management processes are integrated is called project management maturity.

Project Management Maturity can be used to describe an organizational project management system or to assess how well an organization is using project management to manage projects. As mentioned in the chapter before, the questionnaire was divided into three sections: Section A was for a biography, Section B was for a Likert scale, and Section C was for open-ended questions. Each part has a number of questions that were meant to elicit specific information.

Section A was mostly biographical inquiry that assessed the significance and level of engagement of respondents in the study. Respondents were given the opportunity to express their perspectives on several leadership-related topics as well as on what they expected from their project leaders in Section B, which employed the Likert scale to examine factors like perceptions, opinions, expectations, and experiences.

The respondents were required to answer open-ended questions in the final portion (Section C). The gathered data was loaded into an Excel Spreadsheet and then processed to produce graphs, tables, bar charts, tables, and histograms. These illustrative graphs and tables are intended to demonstrate the findings and demonstrate the interrelationships between the study's variables. The results are presented on the pages below.

5.2 Section A: Biography

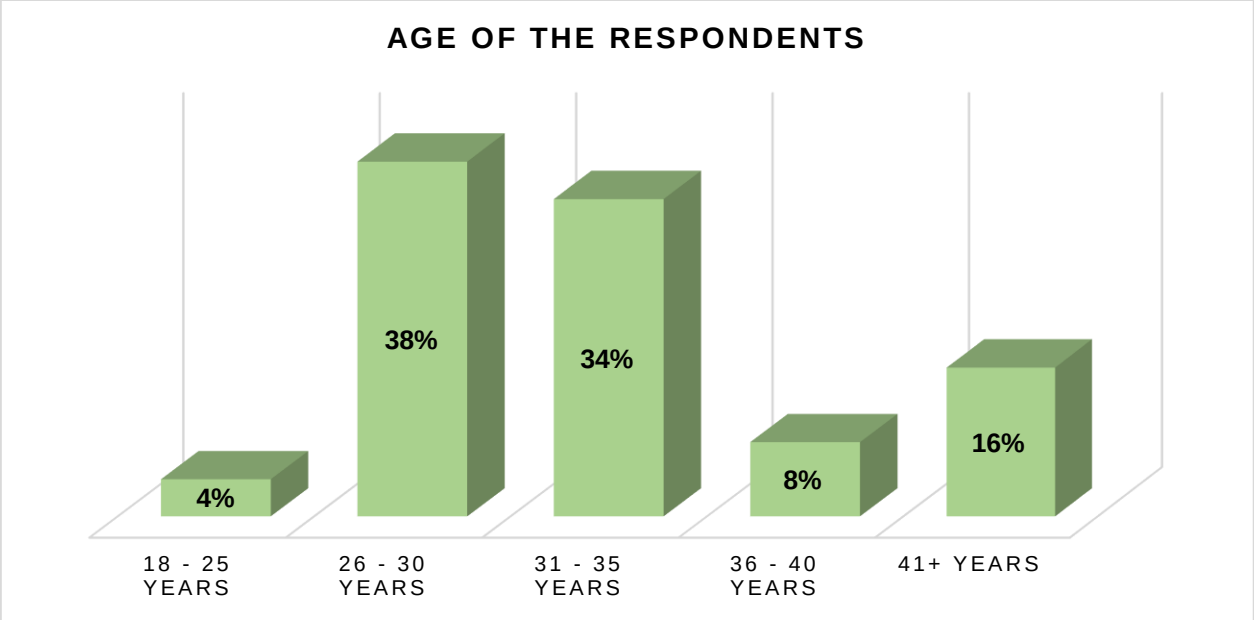
In data reporting, a query is addressed with a brief explanation of the question, followed by a response, which is illustrated with diagrams and/or tables. The biographical section questions

were used to certify respondent's eligibility to participate because there was a specific research target group.

Question 1: How old are you?

Response: The main goal of this inquiry was to determine the typical age of the project execution team members. The possibility of an association between age and the ascribed level of project execution comprehension was acknowledged, even though this may not have much of an impact on one's capacity to carry out or manage project processes.

Figure 5.1: The age range of respondents

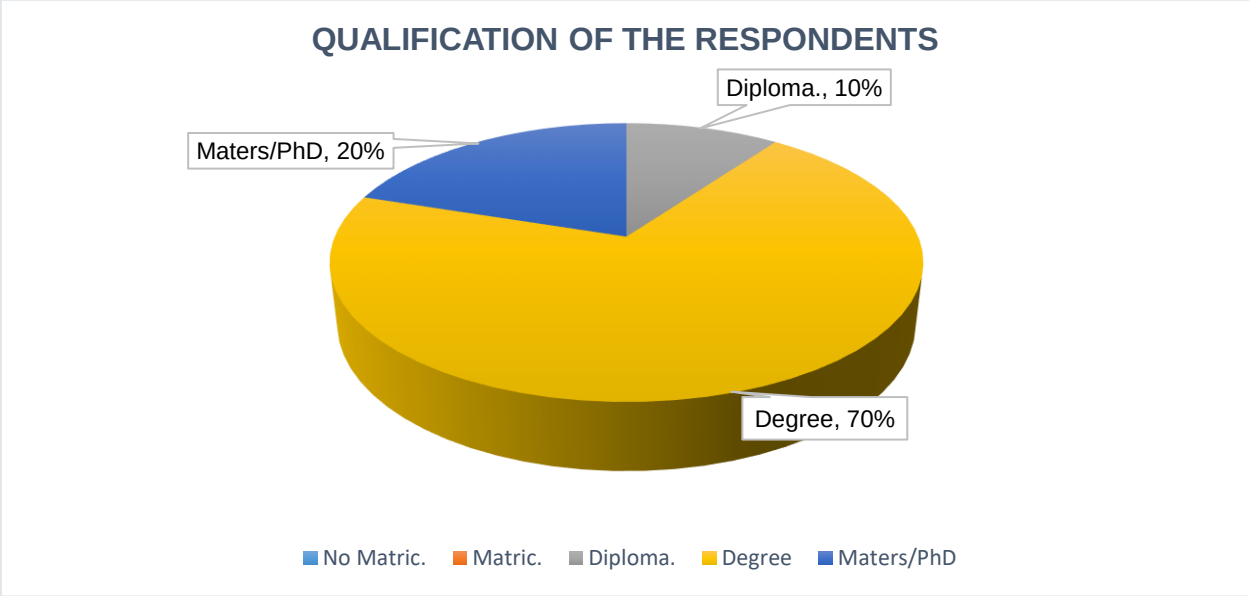


Source: Author's own construction

Considering the graph above, 4% of the respondents were between the ages of 18 to 25; 38% were between the ages of 26 to 30; 34% were between the ages of 31 to 35; 8% were between the ages of 36 to 40; and 16% were over the age of 41. According to this graph, the majority of study participants are between the ages of 26 to 30, while a small number were between the ages of 18 to 25.

Question 2: One of the most important issues in this area is the issue of education. Participant's level of education, including the degree they held, was rated. The researcher determined the respondent's level of education using this question. Project managers must have the necessary credentials and should be constantly learning in order to meet the challenges they confront, both inside and externally. Figure 5.2 below displays the investigation's findings

Figure 5.2: What is your highest qualification?



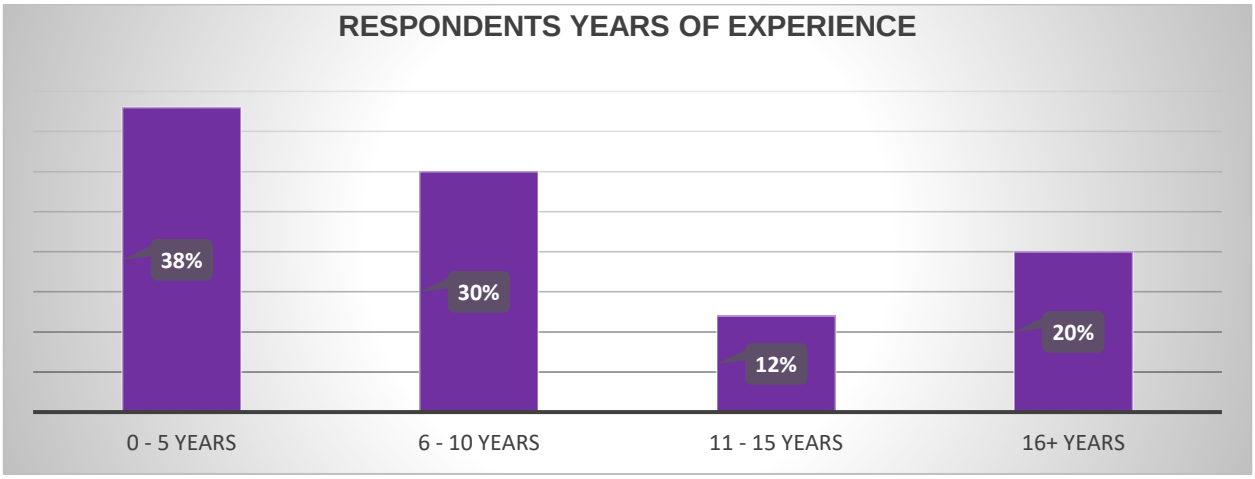
Source: Author's own construction

According to figure 5.2 above 70% of the respondents have a bachelor's degree while 20% of the respondents have a master's degree and only 10% of the respondents have a diploma.

Question 3: How long have you been working, including your previous occupation?

Response: To ascertain whether respondents had any work experience, this was a crucial question. The respondent's level of familiarity with the workplace, particularly in project management, can be inferred from their years of experience. The bar graph below in Figure 5.3 displays the participant's responses.

Figure 5.3 Respondents years in current occupation



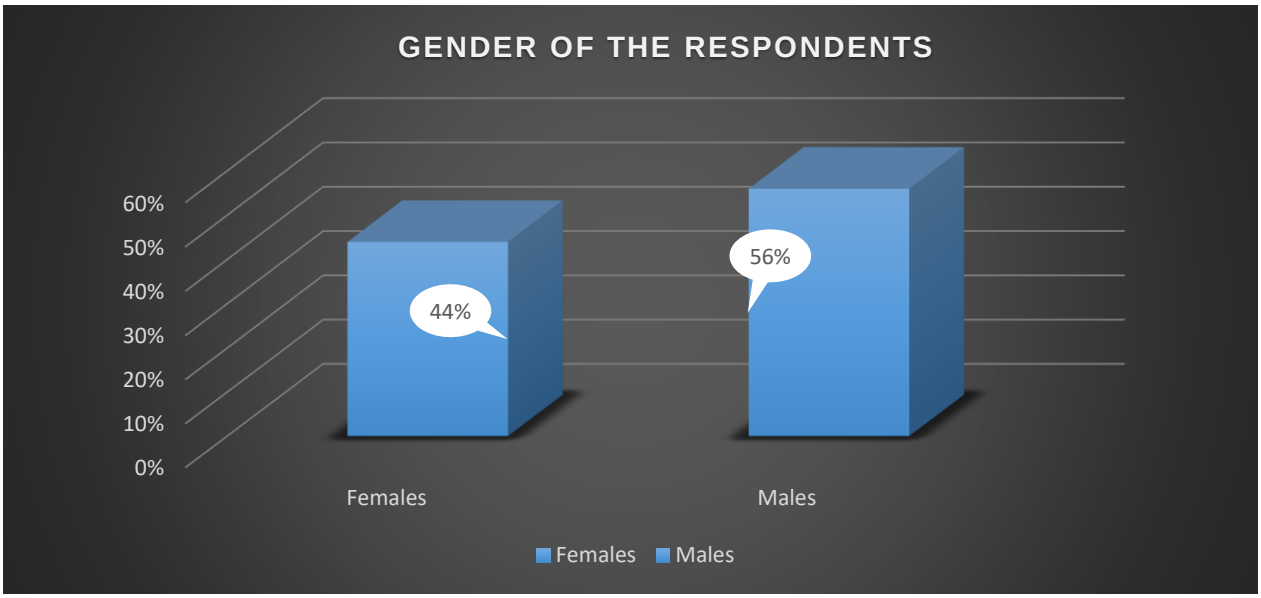
Source: Author's own construction

The participant's varying years of work experience are shown in the graph above. 38% of the respondents have less than 5 years of job experience while 30% have between 6 and 10 years of work experience, 12% of the respondents have between 11 and 15 years, and 20% of the respondents have more than 6 years of work experience.

Question 4: What is your gender?

Response: This question was asked to determine the gender of the survey participants. Figure 5.4 below shows the gender of the responders.

Figure 5.4 Gender of respondents



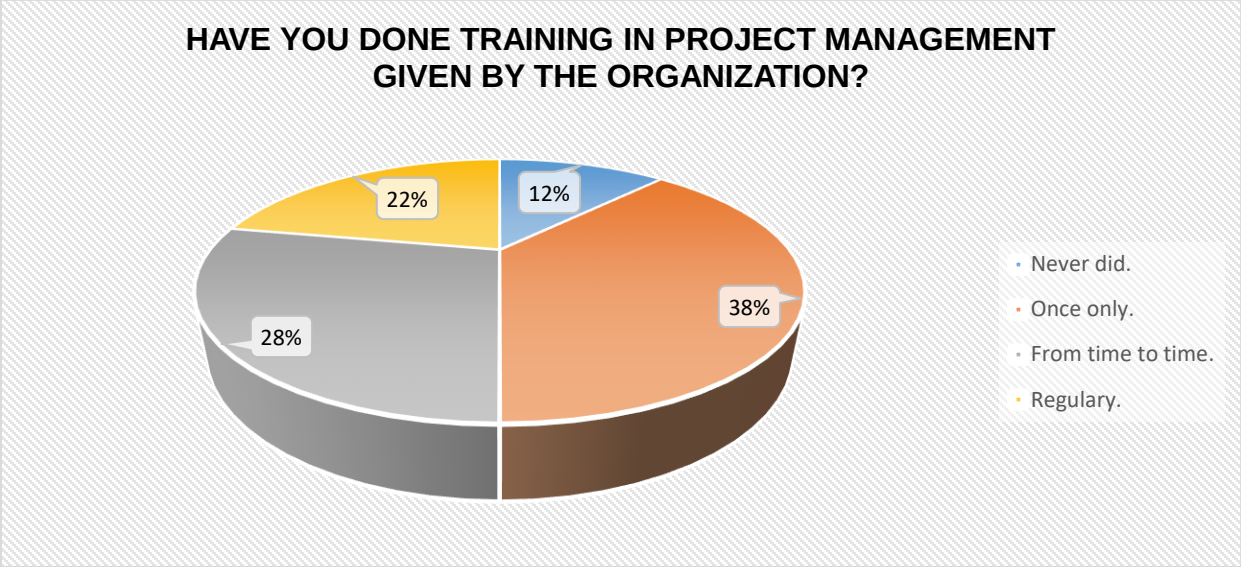
Source: Author's own construction

Figure 5.4 above displays the study's findings. Male respondents made up 56% of the target demographic, while female respondents comprised of 44%.

Question 5: Have you done training in Project Management provided by the organization?

Response: The question asked if the respondents had received any project management training from their employer. The responses are shown in Figure 5.5 below.

Figure 5.5 Project management training provided by organization



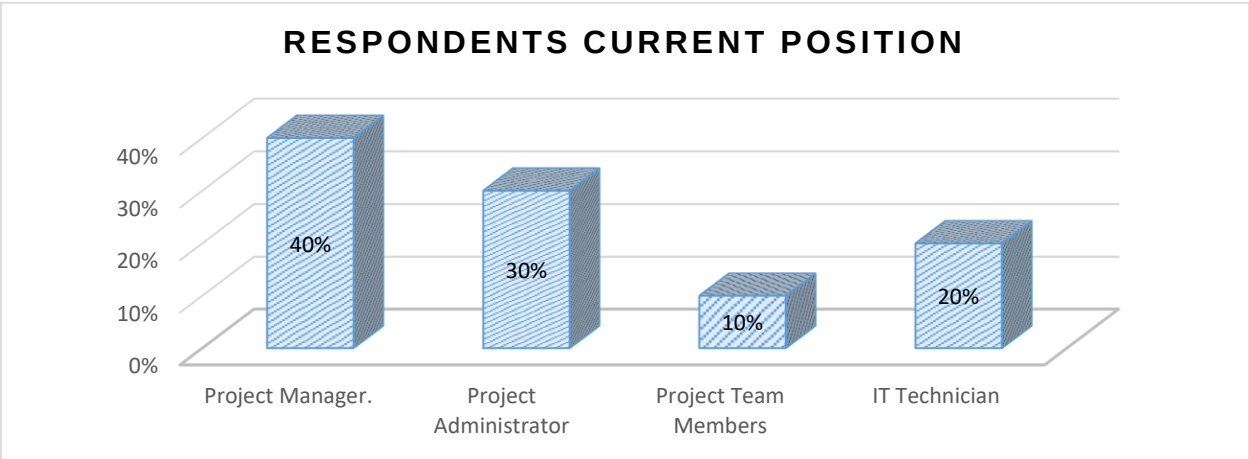
Source: Author's own construction

Figure 5.5 demonstrates that most responders (38%) indicated that they have only undergone formal project management training from their organization once. 28% of the respondents said they receive Project Manage training from time to time from their organization, 22% of the respondents indicated that they received training from the organization regularly and 12% indicated that they have never received any Project Management training from the organization.

Question 6: Please state your current position.

Response: The purpose of the question was to ascertain the respondent's position in the organization, as shown in Figure 5.6 below**.**

Figure 5.6: Respondents current position



Source: Author's own construction

Figure 5.6 above showed that the majority of the respondents (40%) were Project Managers, while 30% of the respondents' were Project Administrators, 10% were Project Team Members and lastly 20% of the respondents were IT technicians.

List here at least two [2] negative experiences with project execution processes within your organization.

Response: Two lines were given for the respondents to report on their negative experiences with project execution processes within their organization. Of the respondents 90% responded, and 10% left this part of the survey blank. Due to the varied responses, responses could not be categorized. However, some responses caught our attention. The items that came up most frequently are listed below.

Table 5.1: Respondent perception on negative experiences with project execution

NO.	PARTICIPANTS' RESPONSES
1	The change or addition of requirement when the project has already been started. That requires more time.
2	Late on-boarding of a Change Manager and not managing project scope effectively.
3	Ensuring the project meets it's anticipated spend for the financial year and excessive red tape.
4	No agreed terminology nor methodology for project lifecycle phases etc. Even more complicated when there is more than one methodology and duplication of governance and reporting effort is demanded.
5	Imbalanced team skills and budget constraints.
6	Being micro-managed by senior management and budget not being entirely outlined.
7	Scope creep when the project is already in execution phase.
8	Red tape and project put on hold because funding may be reallocated to the change in the status quo that may become prioritized.
9	It's a municipality setup, and there are too many stakeholders to satisfy leading to project delays and consequently the budget.
10	It's a scarce skill environment and getting qualified and specialized project resources is always an issue.
11	Engineering department come at the execution without planning activities and they want to include scope of work.
12	There are minimal project management templates for standardization to make use of amongst PMs.

Source: Author's own construction.

List here at least two [2] positive experiences with project execution processes in your organization.

Response: Two lines were allocated for answers on positive experiences with the project execution process within their organization. Of the respondents 90% responded, 10% of them left this part blank. Due to the respondent's varied responses, these responses could not be

categorized. However, some responses caught our attention. The items that came up most frequently are listed below.

Table 5.2: Respondent perception on positive experiences with project execution processes

NO.	PARTICIPANTS' RESPONSES
1	At our organization we are able to assign and break down tasks to individuals within the organization also putting into consideration that certain team members can manage better tasks than others.
2	Proper risk management tools and escalation mechanisms for efficient mitigation identification and implementation.
3	The organization provides all project managers access to a lot of resources in order to successfully complete a project, provided that those resources are identified timeously.
4	Tracking project through PPM and organizational and procured resources to support the project realization.
5	With our stakeholders and customers, We continually review and make needed changes to the project and the processes.
6	We employ best project management tools which in turn help to assess and monitor cost, risk, changes and time management.
7	There appears to be more development in project and contract management processes and structure.
8	Team very competent and deliverables very achievable.
9	Executive management support for standardized PM processes. Then the existing PM system data is utilized by management for progress reporting.
10	Support from organization management and stakeholder engagement during execution.
11	Special Projects environment & forums to assist in execution.
12	Business Relationship Management and Support of PMO throughout project life span.

Source: Author's own construction

5.3 Section B – Likert Scale

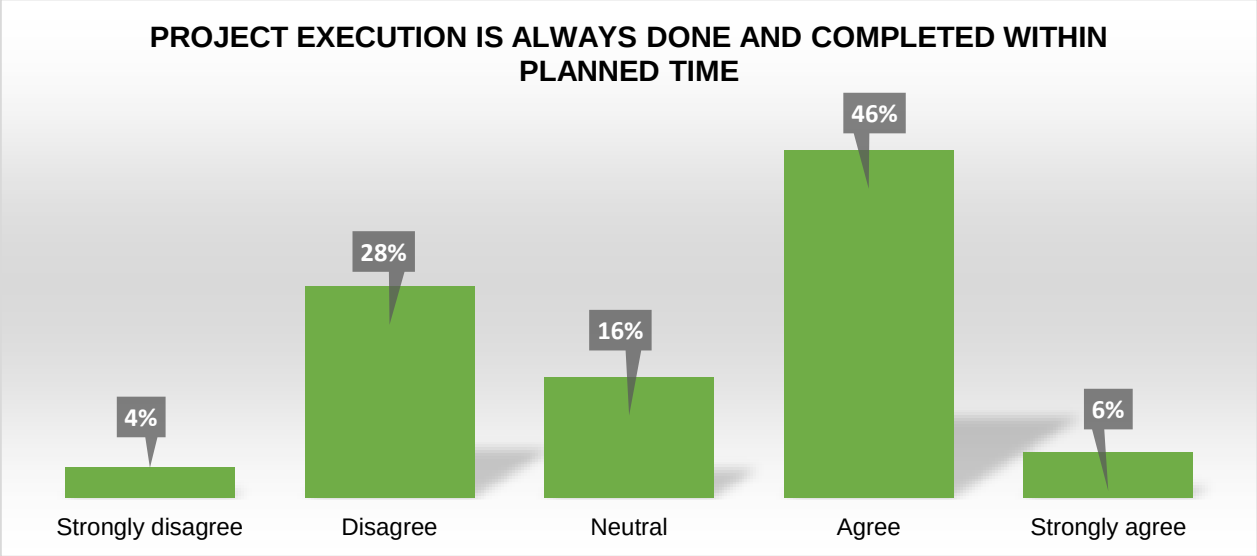
In this portion, the respondent's views and opinions are measured using the Likert scale in relation to specific statements derived from the research question, the problem statement, and the research objectives. The statements on the Likert scale were assessed on a scale of 1 to 5, with 1 denoting strong disagreement, 2 disagreement, 3 neutrality, 4 agreement, and 5 strong agreement. The respondents were asked to rank these statements based on how well they believed they understood them. The same approach that was used in the biographical section was employed here, where the statement is presented as it would appear in the questionnaire and is accompanied by a response that is given in an illustrated manner. The sentences that follow are repeated.

PROJECT MANAGEMENT MATURITY

Statement 1: Project execution is always done and completed within planned time

Response: Time is one of the key limitations inside the iron triangle that defines successful project execution, hence the statement's goal was to ascertain whether project execution is always finished within the allotted time. Figure 5.7 below shows the respondent's perceptions.

Figure 5.7: Respondents perception on project execution and time



Source: Author's own construction

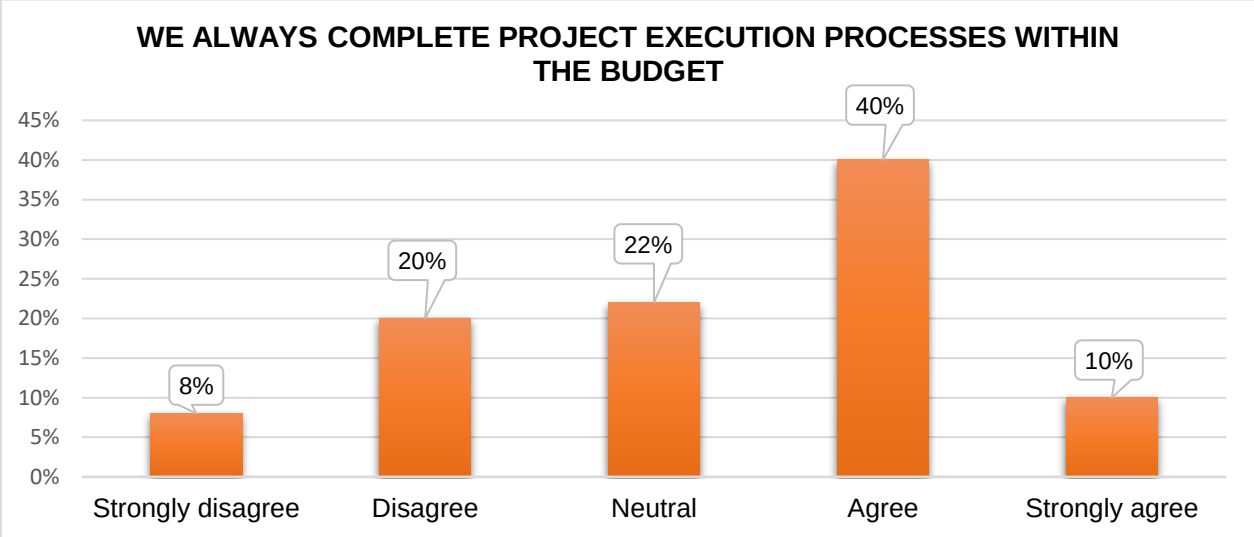
Of the respondents a total 52% agreed that projects are always completed within the anticipated time (46% agreed and 6% strongly agreed respectively). 16% were neutral, while a total of 36%

of the respondents disagreed. Therefore, it can be generalized that majority of respondents affirm that project execution is always finished within the predetermined scheduled period**.**

Statement 2: We always complete project execution processes within the budget.

Response: The goal was to find out whether project execution processes are always completed within budget. One of the three criteria for project management success, together with schedule performance (time) and scope, is cost performance. Therefore, it was crucial to determine whether organizations' efforts at benchmarking incorporated cost performance. Figure 5.8 shows the opinions of the respondents.

Figure 5.8: Respondents perception on project execution completed within budget



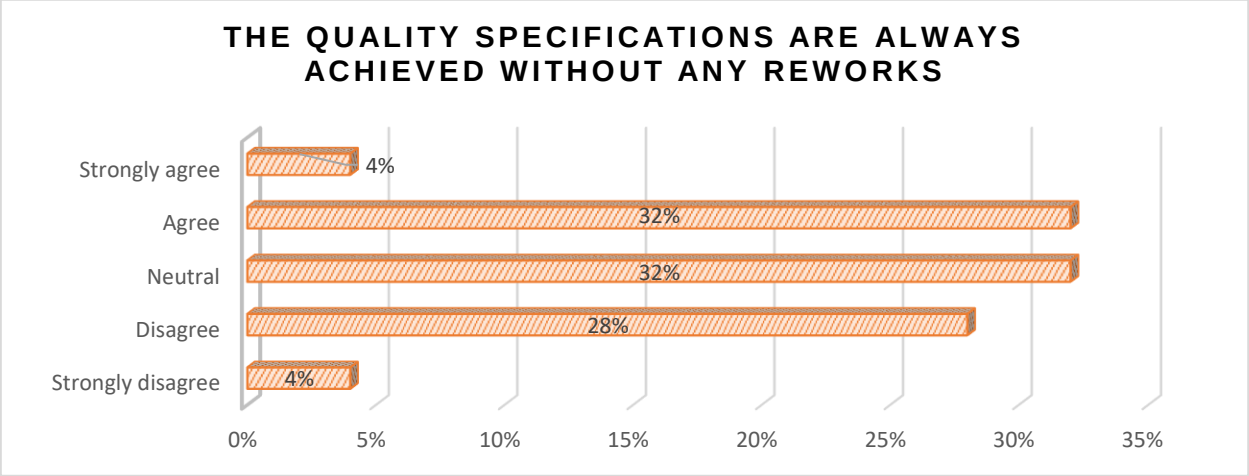
Source: Author's own construction

Figure 5.8 above illustrates that a total of 50% of the respondents (40% agree and 10% strongly agree respectively) that their organization benchmarked the cost performance of their projects. A combine total of 28% were in disagreement while 22% of the respondents remained neutral. Thus it can be concluded that the majority are in agreements that their project execution processes are always completed within the budget.

Statement 3: The quality specifications are always achieved without any reworks.

Response: Quality management is a key element of project management. It requires sticking strictly to the project's specifications throughout the whole project lifecycle. The emphasis should be on quality policies, strategies, procedures, programs, and specifications. Figure 5.9 below shows the respondent's perception.

Figure 5.9: Respondents perception on quality specification



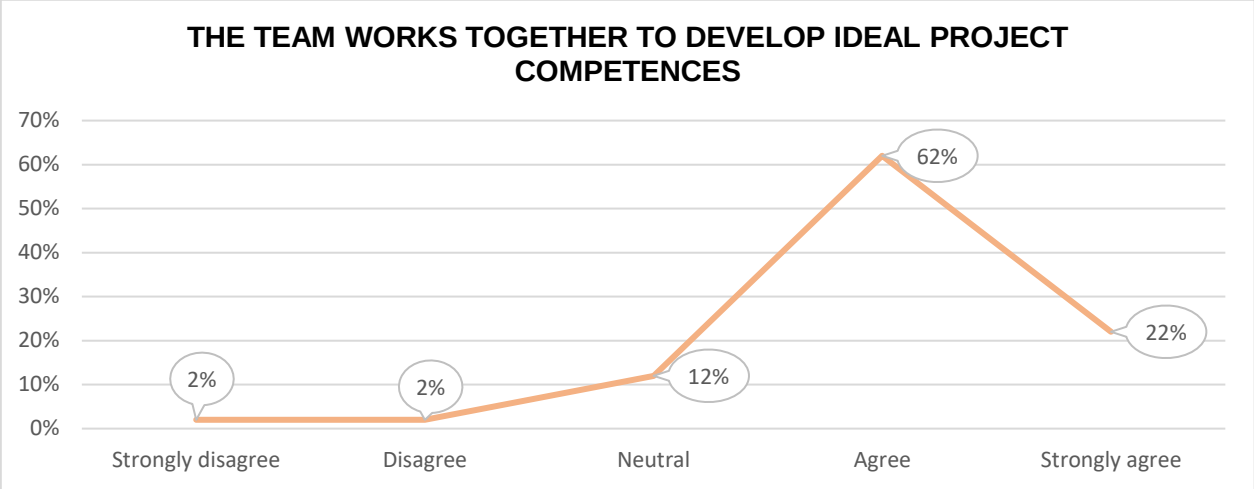
Source: Author's own construction

The majority of respondents 36% agreed with the statement that quality specifications are always met without rework, demonstrating the organization's commitment to quality management. 4% of the respondents strongly agreed. Of the respondents 28% disagreed with the statement while 4% strongly disagreed, and lastly 32% of the respondents had no opinion about the statement. Based on the results it can be generalized that the majority of respondents believe that in their organization the quality specifications are always achieved without any reworks.

Statement 4: The team works together to develop ideal project competences

Response: This statement was made to determine if the respondents regarded project team work as important when it came to resource management, planning, and organization to ensure a project's successful completion. Working as a team guarantees efficient resource management and reduces project completion times. Figure 5.10 below shows the findings.

Figure 5.10: Respondents perception on ideal project competences



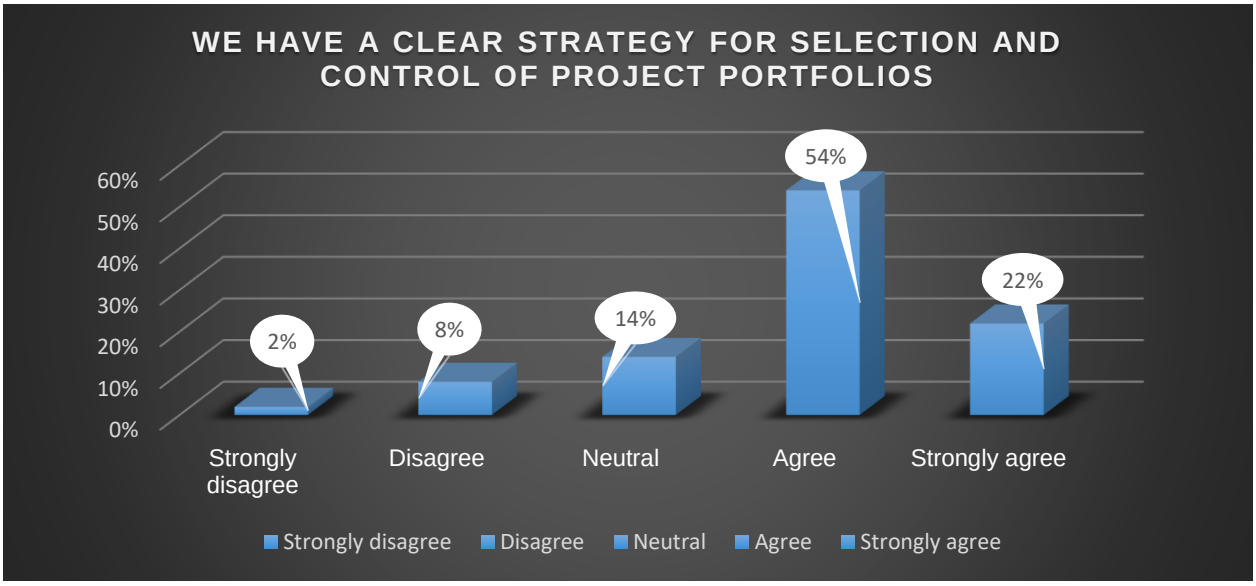
Source: Author's own construction

Figure 5.10 above shows that 22% of the respondents strongly agreed with the assertion that in the organization the team works together to develop ideal project competences, 62% of the respondents agreed. A total of 4% of the respondents were in disagreement (2% disagree and 2% strongly disagree respectively) and only 12% of the respondents remained neutral. Thus is can be concluded based on the results that majority of respondents are in agreement that in their organization that teams works together to develop ideal project competences.This demonstrates that project teamwork is entrenched in the organization.

Statement 5: We have a clear strategy for selection and control of project portfolios

Response: This statement sought to solicit responses on the alignment of company strategy and project priorities. The statement expanded on how portfolio management was applied at the respondent's organizations. By employing portfolio management, senior leader's pet projects are not prioritized over the organization's strategic goals. The responses are shown in Figure 5.11 below.

Figure 5.11: Respondents perception on strategy for selection and control of project portfolios.



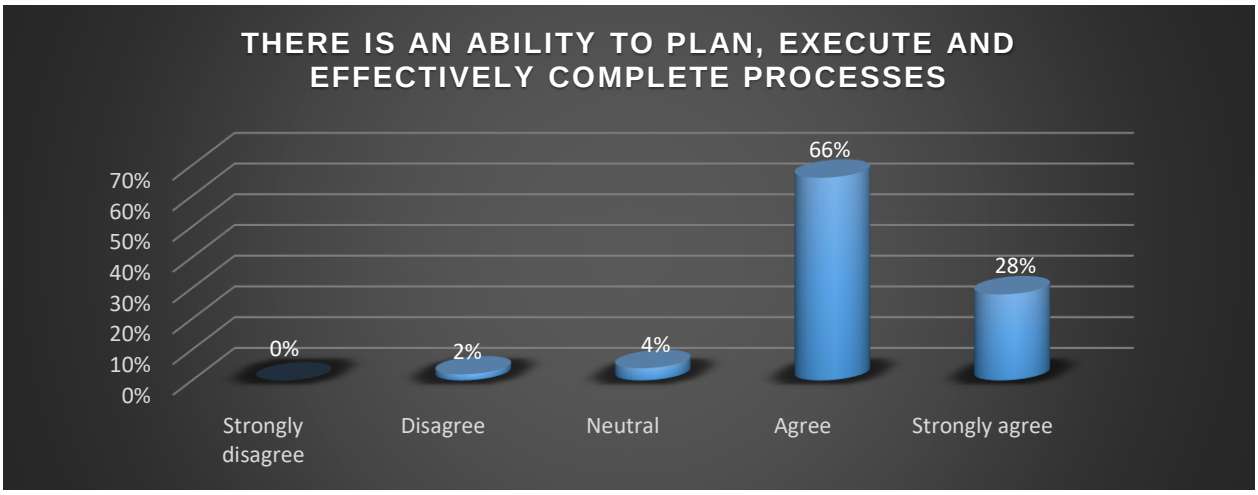
Source: Author's own construction

Figure 5.11show that of the respondents 54% agreed and 22% strongly agreed, 8% of the respondents disagreed while 2% strongly disagreed, and 14% of the respondents were neutral. Thus it can be generalized that the respondents are in agreement by the majority that their organization has a clear strategy for selection and control of project portfolios.

Statement 6: There is an ability to plan, execute and effectively complete processes

Response: The discipline of planning, organizing, and managing resources to guarantee the effective completion of a specific project is essential for project success in an organization. The responses are shown in Figure 5.12 below.

Figure 5.12: Respondents perception on planning and execution



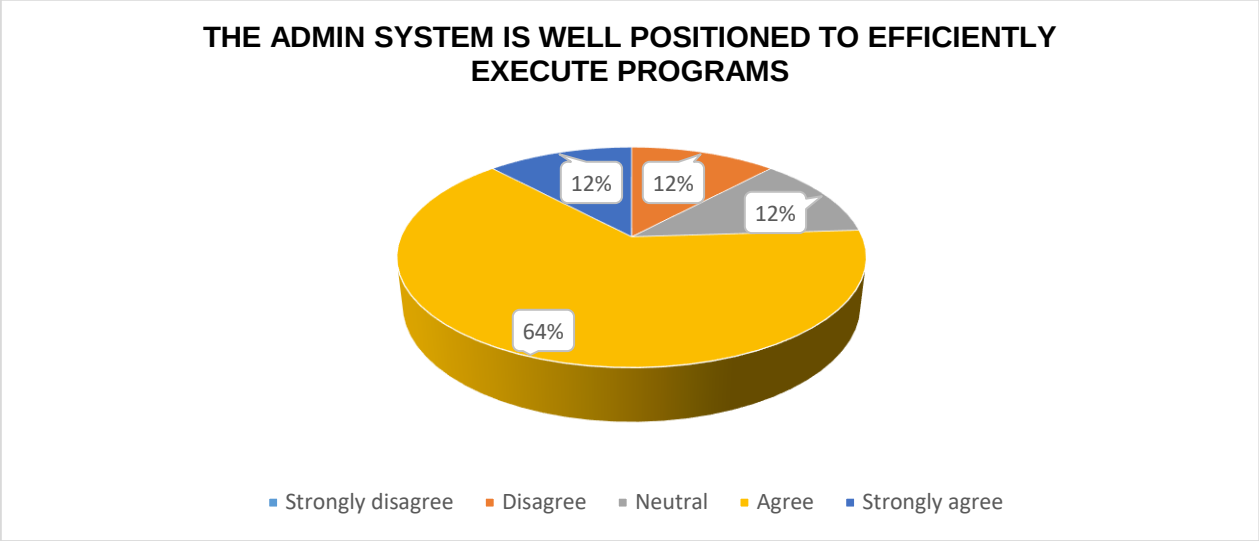
Source: Author's own construction

The combine majority of the respondents (66%) agreed with the statement that their organization has the ability to design, execute, and successfully complete procedures; 28% strongly agreed, 2% disagreed, and only 4% remained neutral. Based on the results it can be concluded that the majority respondents affirm that their organization has the ability to plan, execute and completed project processes effectively.

Statement 7: The admin system is well positioned to efficiently execute programs

Response: The admin system is in charge of several project-related administrative tasks. These responsibilities include managing meetings, keeping track of project costs, and employing time management techniques to keep the team on task. The respondents responded as follows, as shown in Figure 5.13 below.

Figure 5.13: Respondents perception on admin system.



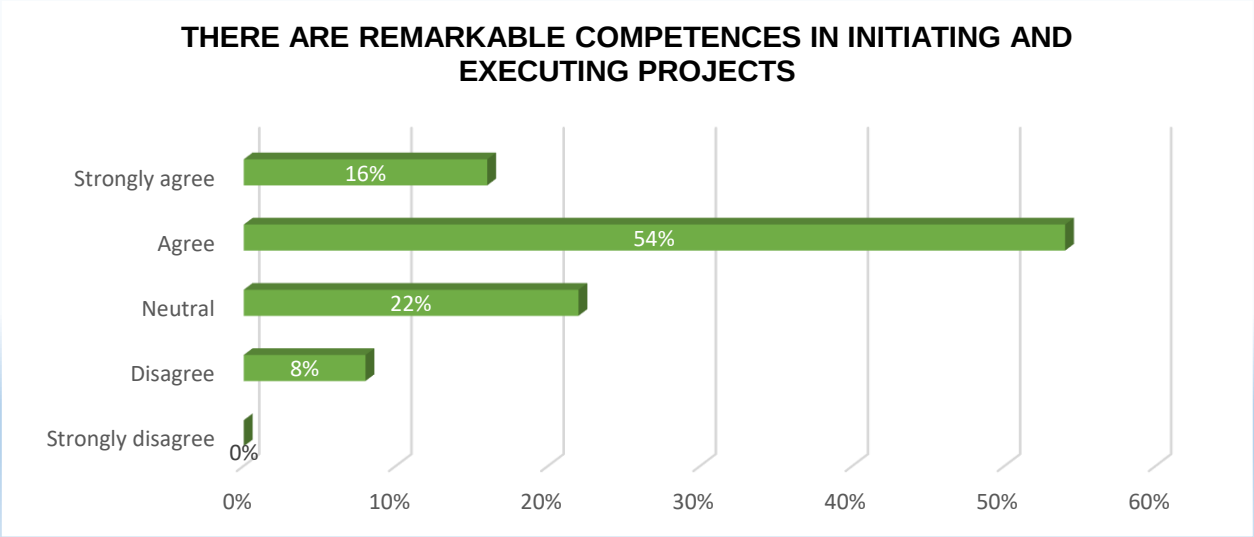
Source: Author's own construction

On the statement that the organization had admin system well positioned to efficiently execute programs the majority of the respondents at 64% agreed, 12% strongly disagreed while 12% of the respondents disagreed, lastly 12% of the respondents remained neutral. Thus It can be concluded based on the results the majority respondents affirm that the organization has good admin system in place to effectively and efficiently execute project management relate programs.

Statement 8: There are remarkable competences in initiating and executing projects

Response: Project management is the capacity to apply knowledge, abilities, tools, and strategies to project activities in order to meet project requirements. Having these talents on the project team is therefore essential. The respondent's reaction to the statement is shown in Figure 5.14 below.

Figure 5.14: Respondents perception on Project Management executive skills



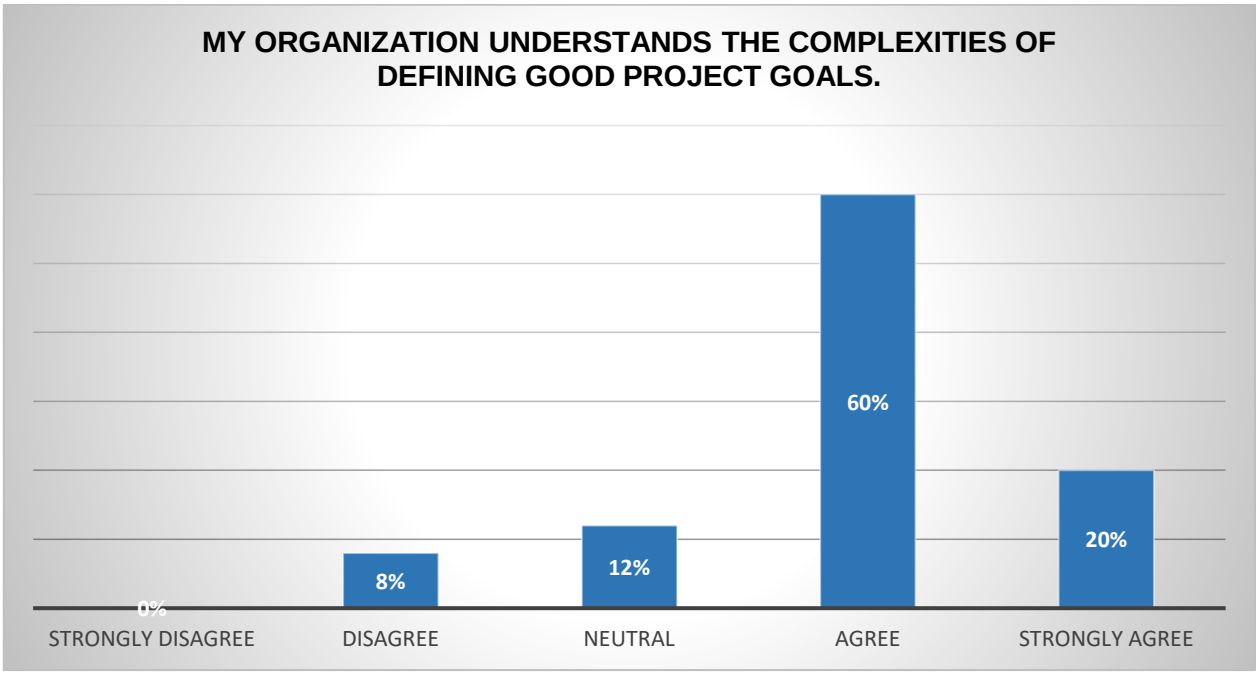
Source: Author's own construction

Of the respondents only 8% disagreed, while 54% of the respondents agreed with the statement.16% of the respondents strongly agreed that their organization possesses impressive competencies in launching and carrying out projects, only 22% had no opinion or remained neutral. It can thus be concluded based on the results that the majority respondents believe there are remarkable competences in initiating and executing projects within their organization.

Statement 9: My organization understands the complexities of defining good project goals

Responses: Project complexity has become a source of increasing concern as projects have become more complex. Project managers need to have a thorough understanding of project complexity and how it should be managed given the differences in decision-making and goal-setting that are related to complexity. Complexity affects project planning and control; it can make it challenging to specify goals and objectives; it can have an effect on decisions regarding the best type of project organization; and it can even have an effect on project outcomes. The responses are shown in Figure 5.15 below.

Figure 5.15: Project Complexities



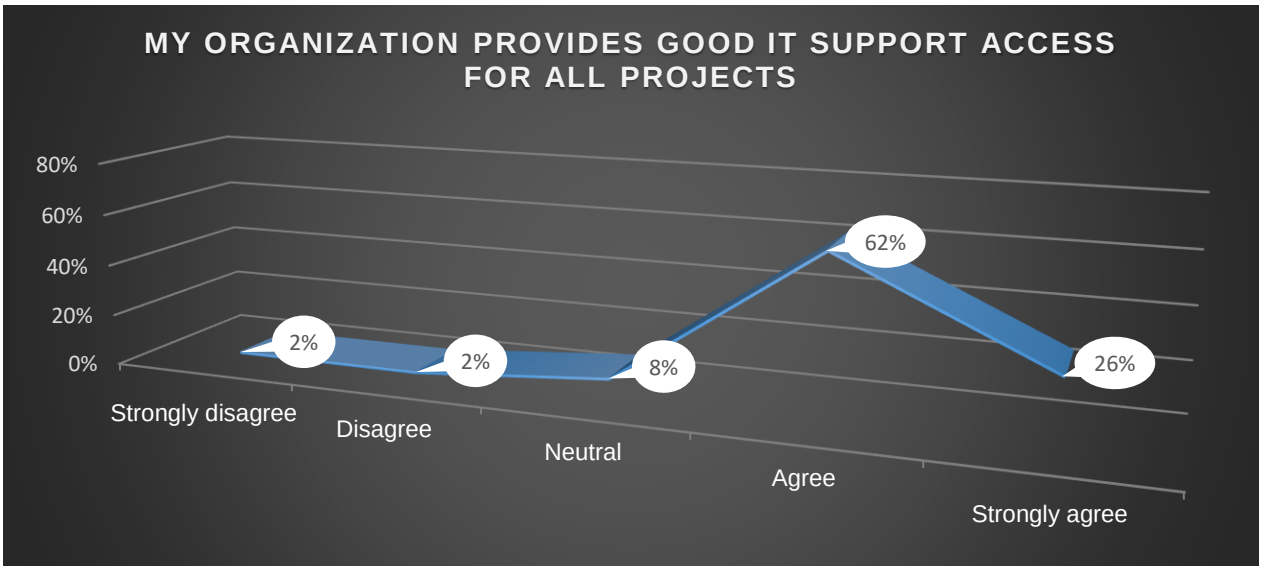
Source: Author's own construction

The majority of the respondents at 60% agreed and 20% strongly agreed.12% were neutral, and 8% disagreed with the above statement. Thus it can be generalized based on the results that the majority of respondents are in agreement that their organization understands the complexities of defining good project goals.

Statement 10: My organization provides good IT support access for all projects

Response: Project management procedures are progressively being automated by means of software tools used by businesses all over the world. The methods and instruments used to collect, combine, and distribute the results of project management procedures make up a comprehensive information system; which assists with starting and finishing a project. Figure 5.16 below shows the responses.

Figure 5.16: Respondent perception on good IT support access for all projects



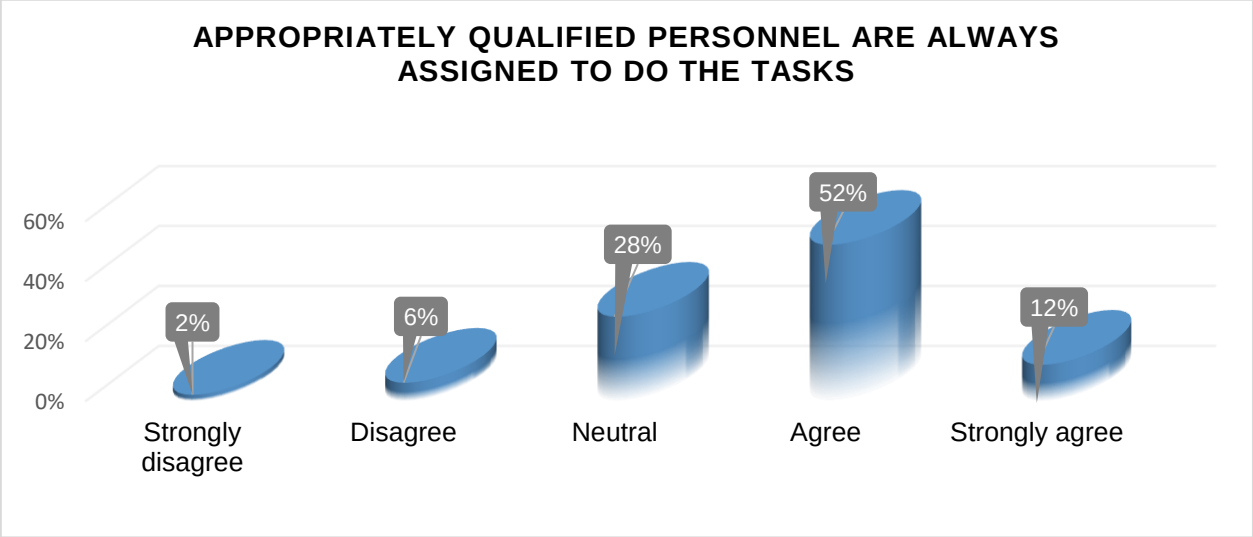
Source: Author's own construction

Of the respondents 62% agreed, and 26% strongly agreed their organization- offers good IT support for all their project. 2% strongly disagreed and 2% disagreed, and 8% remained neutral. It can be concluded based on the results that the majority of respondents are affirm that their organization provides good IT support access for all projects.

Statement 11: Appropriately qualified personnel are always assigned to do the tasks

Response: The statement aimed to get the respondent's agreement that duties are given to qualified project team members within their company. In the course of their daily work, project managers are responsible for a variety of tasks, and assigning work to team members is one of these tasks. The right team member must be assigned to the right task, and the project managers must make sure of this. Project leaders need to be fully aware of the skills and work history of their team members. Figure 5.17 below shows the responses.

Figure 5.17: Respondents perception of tasks delegation



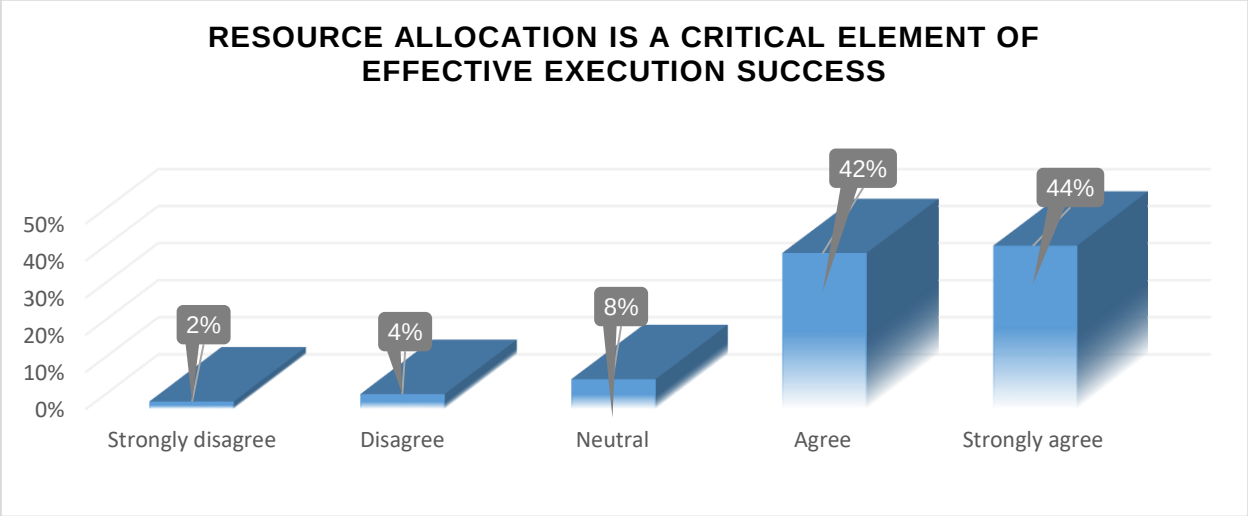
Source: Author's own construction

Figure 5.17 above shows that a total of 64% of the respondents concurred with the above statement (52% agree and 12% strongly agree respectively), 6% disagreed and 2% strongly disagreed with the statement, and 28% were neutral. Based on the results it can be concluded that majority respondents are in agreement that aappropriately qualified personnel are always assigned to do the tasks.

Statement 12: Resource allocation is a critical element of effective execution success

Responses: Resource allocation is the process of assigning the best resources to jobs and projects. To avoid under or over utilizing resources, workloads are controlled via resource management. Personnel are reassigned as necessary, in accordance with the project timetables and the current resource availability. Responses are shown in Figure 5.18 below.

Figure 5.18: Respondents perception on resource allocation



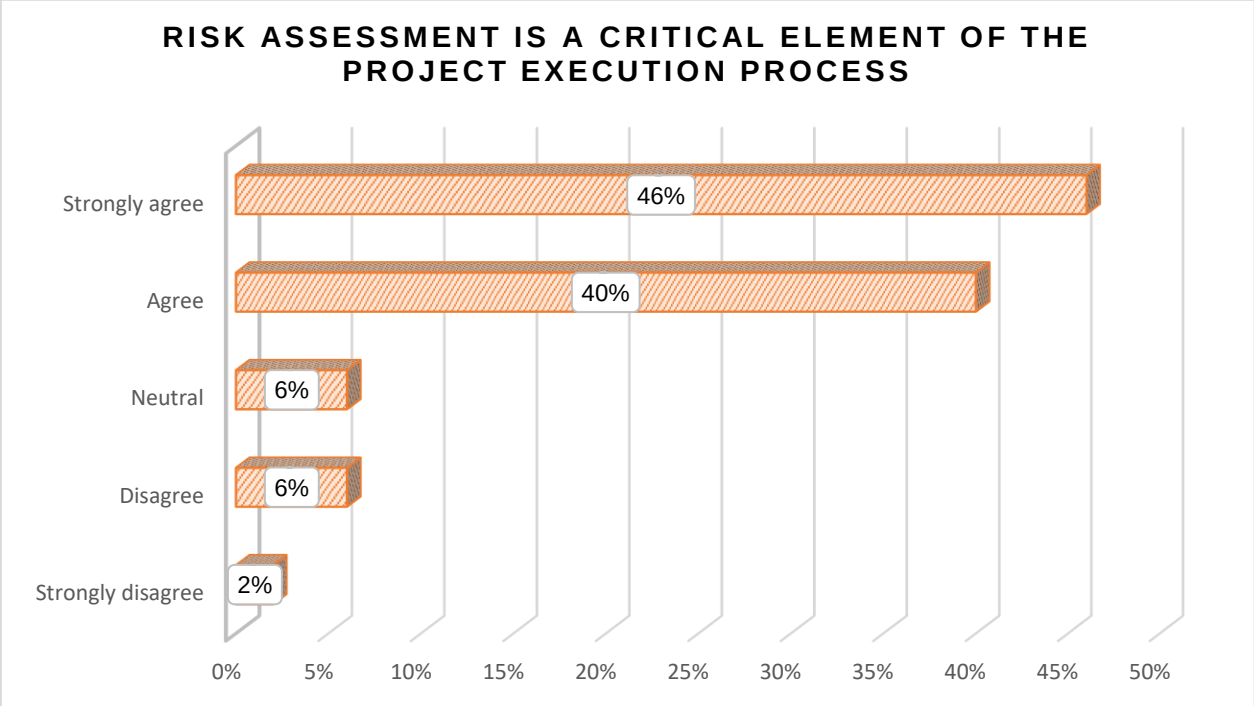
Source: Author's own construction

Of the respondents 42% agreed and 44% strongly agreed with the assertion that resource allocation is a crucial component of successful execution (respectively), 2% strongly disagreed while 4% disagreed, and 8% were neutral. Thus it can be generalized that majority of respondents affirm that resource allocation is a critical element of effective execution success.

Statement 13: Risk assessment is a critical element of the project execution process

Response: The aim of the statement was to get the respondents' perspective on risk assessment and its implication in successful project execution. To guarantee that there are as few surprises as possible while your project is in progress, risk analysis and management is a crucial project management strategy. While it is impossible to predict the future with absolute precision, we can use a basic risk management strategy to identify potential pitfalls and reduce the likelihood that they will arise. This raises the likelihood of a project's success and lessens the risks negative effects. Figure 5.19 below shows the respondent's responses.

Figure 5.19: Respondents perception on Risk Assessment



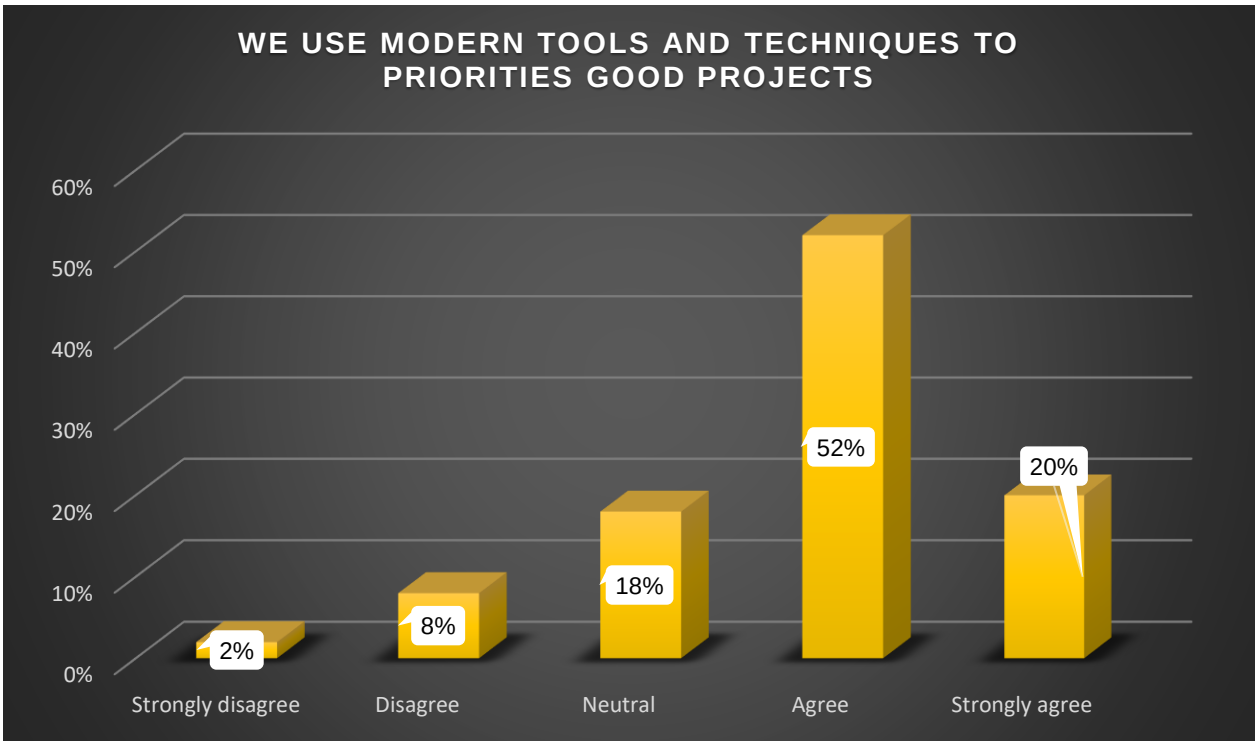
Source: Author's own construction

Of the respondents 40% agreed and 46% strongly agreed with the above statement, 6% stayed neutral while 6% disagreed and only 2% strongly disagreed. It can be concluded that the majority of respondents are in agreement that risk assessment is critical when it comes to project execution process within their organization.

Statement 14: We use modern tools and techniques to priorities good projects

Response: The statement aimed to assess whether modern tools and techniques are used in the organization for project prioritization. Project management requires the use of specific tools and techniques. The methods and tools used in project management are precisely what makes it simpler and more efficient to manage projects. Numerous project management methods are available that can be used to enhance and maximize the effectiveness of project processes. Modern tools and techniques also allow the organization to prioritize projects that fit the strategic objectives of the organization. These tools allow the organization to select not only good projects but projects that are a good fit. The findings are shown below.

Figure 5.20: Respondents perception on tools and techniques for project prioritization



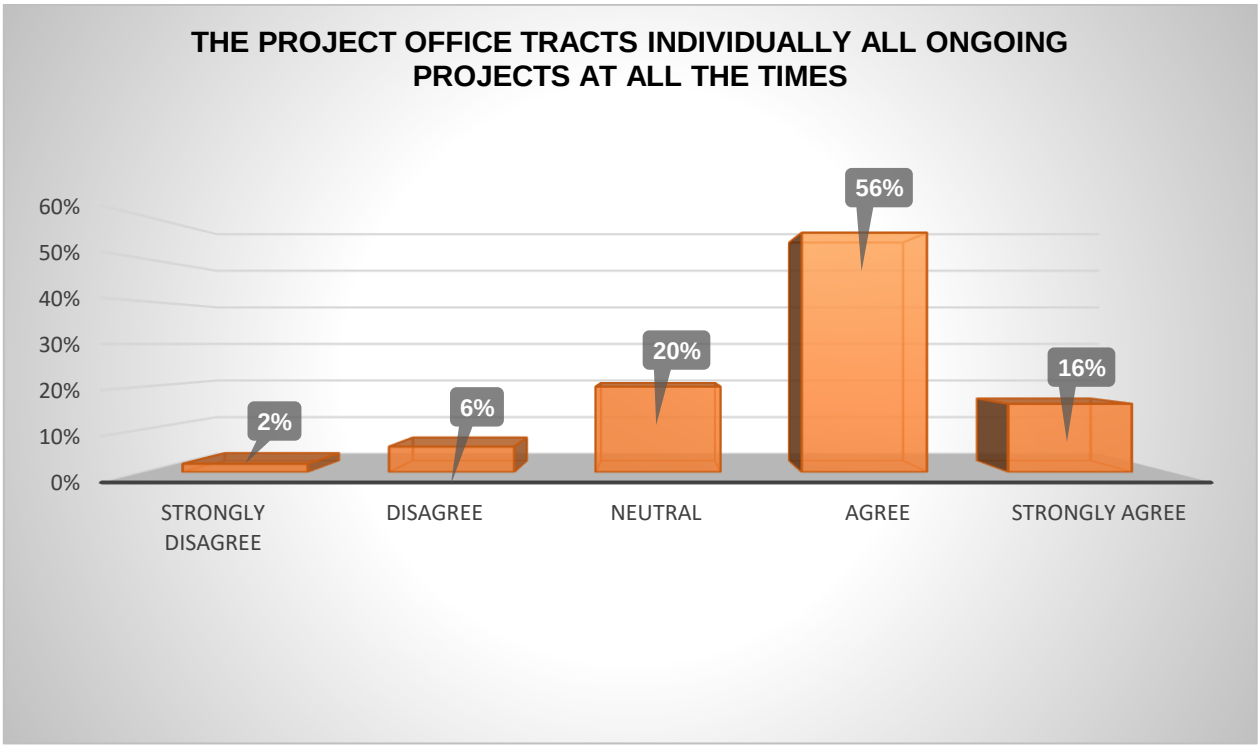
Source: Author's own construction

Of the respondents a combined total of 72% were in agreement with the statement (52% agreed and 20% strongly agreed respectively), a combined total of 10% of the respondents were in disagreement (8% disagreed and 2% strongly disagreed respectively), and 18% were neutral. Therefore the majority of respondents agreed that their organization employs contemporary tools and strategies to prioritize worthwhile projects.

Statement 15: The project office individually tracks all ongoing projects at all the times

Response: This purpose of the statement was to ascertain if the project management office of the respondent's company kept track of ongoing projects on an individual basis. Project tracking starts with planning early on and continues until the project is finished. The object of the exercise is to follow the development of the project to spot potential issues early and fix them. Monitoring project performance on a regular basis to spot deviations from the project management plan can help you ensure that your projects are on schedule. Respondents' answers are listed below.

Figure 5.21: Respondents perception project office tracking individual projects



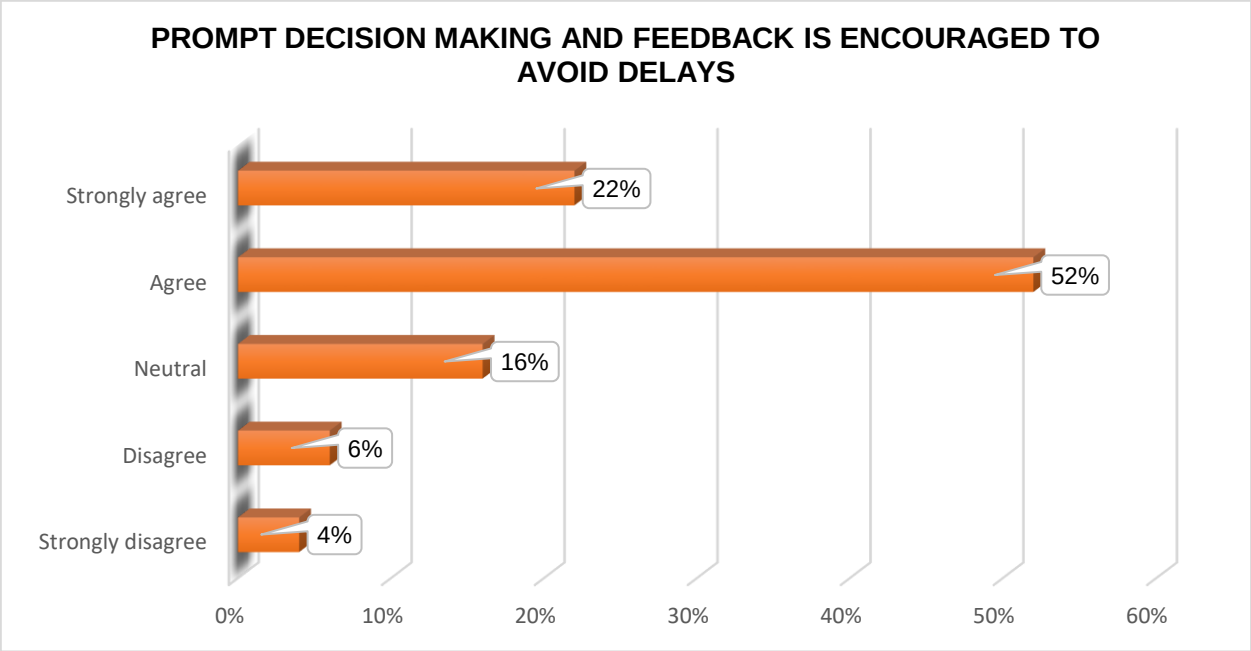
Source: Author's own construction

Figure 5.21 above shows the respondents perception on whether the project management office of the organization tracks each active project separately, 56% and 16% strongly agreed with the above statement, respectively. A total of 8% of the respondents disagreed (6% disagreed and 2% strongly objected), and the remaining 20% were neutral. Based on the results, a conclusion can be made that respondents are in agreement that the project office individually tracks all ongoing projects at all the times.

Statement 16: Prompt decision making and feedback is encouraged to avoid delays

Response: The aim of this statement was to ascertain the respondent's comprehension of timely feedback and decision-making. When managing projects, the project manager must have a solid understanding of how delays arise. Then and only then are they able to prevent them from occurring or deal with them if they happen unintentionally. Figure 5.22 below shows the respondents opinions on the previously indicated statement.

Figure 5.22: Respondents perception on prompt decision making and feedback is encouraged to avoid delays



Source: Author's own construction

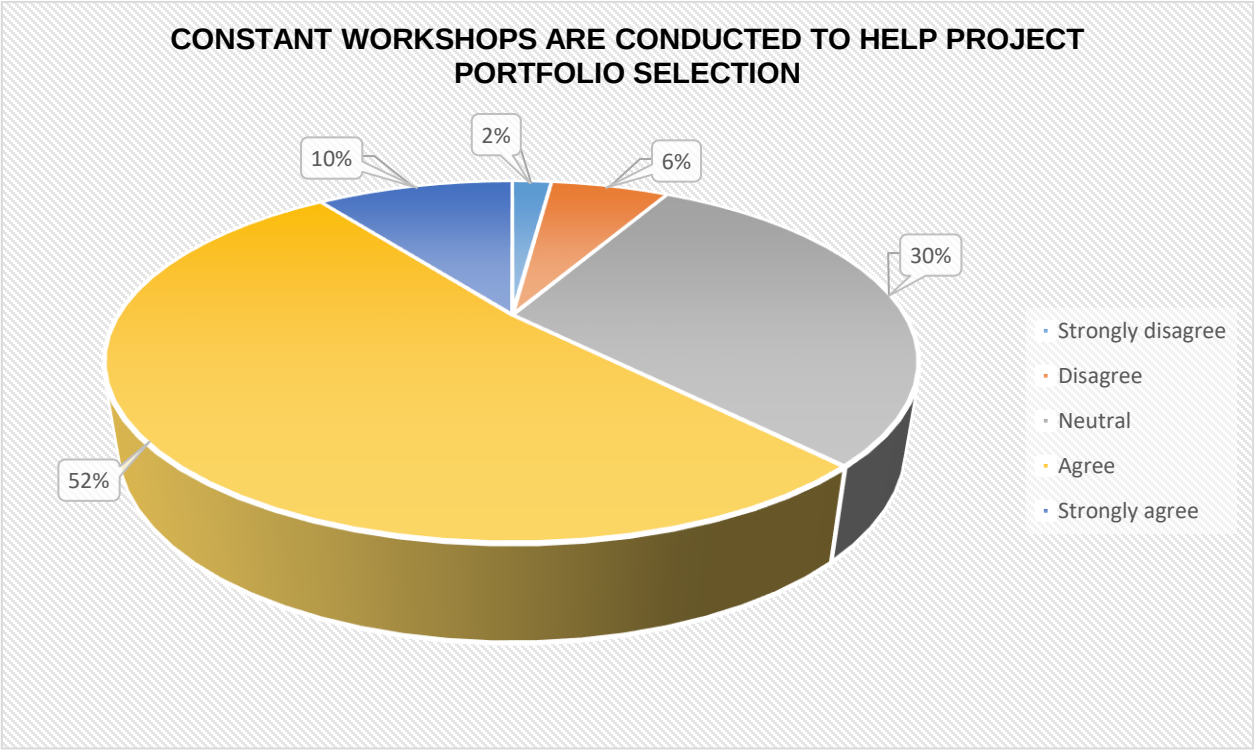
Of the respondents a combined total of 74% (52% agreed and 22% strongly agreed) concurred that rapid decision-making and feedback were essential for preventing project delays, 10% were in disagreement (6% objected and 4% strongly disagreed), while 4% remained undecided. Based on the results, a conclusion can be made that majority of respondents affirm that prompt decision making and feedback is encouraged to avoid delays.

Statement 17: Constant workshops are conducted to help project portfolio selection

Responses: The ongoing process of choosing and overseeing the ideal group of project-oriented activities that maximizes company value or return on investment is known as project portfolio management. It is a dynamic decision-making process that enables management to agree on the optimal allocation of resources to concentrate on initiatives that are tactically compatible with their business goals and objectives and are realistically doable.

The statement sought to solicit a response from the respondents about business strategy alignment and project portfolio selection. Figure 5.23 below shows the respondents' response.

Figure 5.23: Respondents perception on project portfolio selection



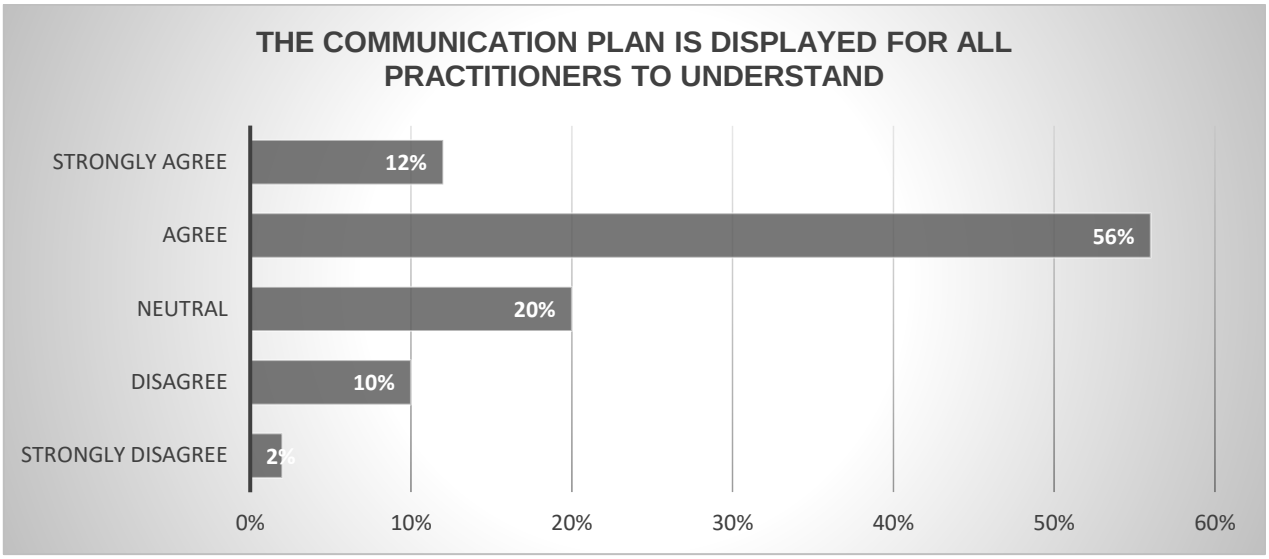
Source: Author's own construction

Of the respondents a combined 62% were in agreement (52% agree and 10% strongly agree respectively) with the above statement, 30% were neutral, while a total of 8% disagreed with the statement. It can thus be concluded based on the results that majority of the respondents are in agreement that constant workshops are necessary to help with project portfolio selection.

Statement 18: The communication plan is displayed for all practitioners to understand

Response: The goals of a communication strategy are to identify who needs to know about and be updated about the project, how and how often information will be shared, and who will be responsible for distributing that information. It is a part of the project management plan as a whole. The statement was made to get the respondent's opinion on how useful a communication plan was. The responses are shown in Figure 5.24 below.

Figure 5.24: Respondents perception on communication plan



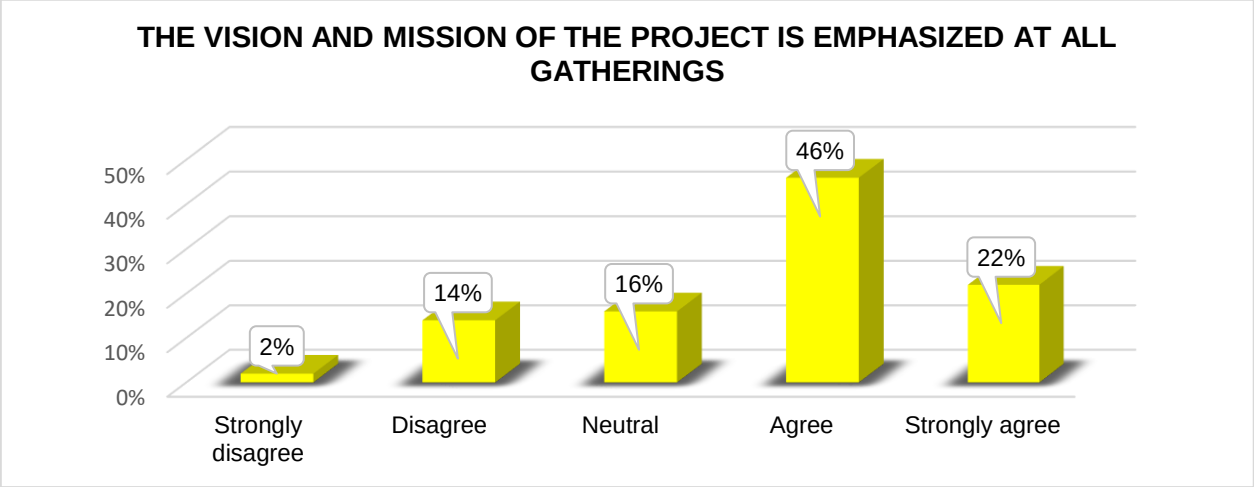
Source: Author's own construction

Figure 5.24 above shows that while a combined total of 12% of the respondents disagreed with the statement (10% disagree and 2 % strongly disagree respectively), 68% of the respondents were in agreement (56% agree and 12% strongly agree), and 20% expressed no opinion. It can be concluded based on the results that the communication plan is displayed for all project practitioners to understand.

Statement 19: The vision and mission of the project is emphasized at all gatherings

Response: Through a group activity, the projects vision and goal are formed, encouraging all those participating to have a broad and idealistic perspective on the project's outcomes. Before the first meeting, team members typically already know that they have been selected for a project. Figure 5.25 below shows the results.

Figure 5.25: Aspects of the plan are ignored because of budget shortages



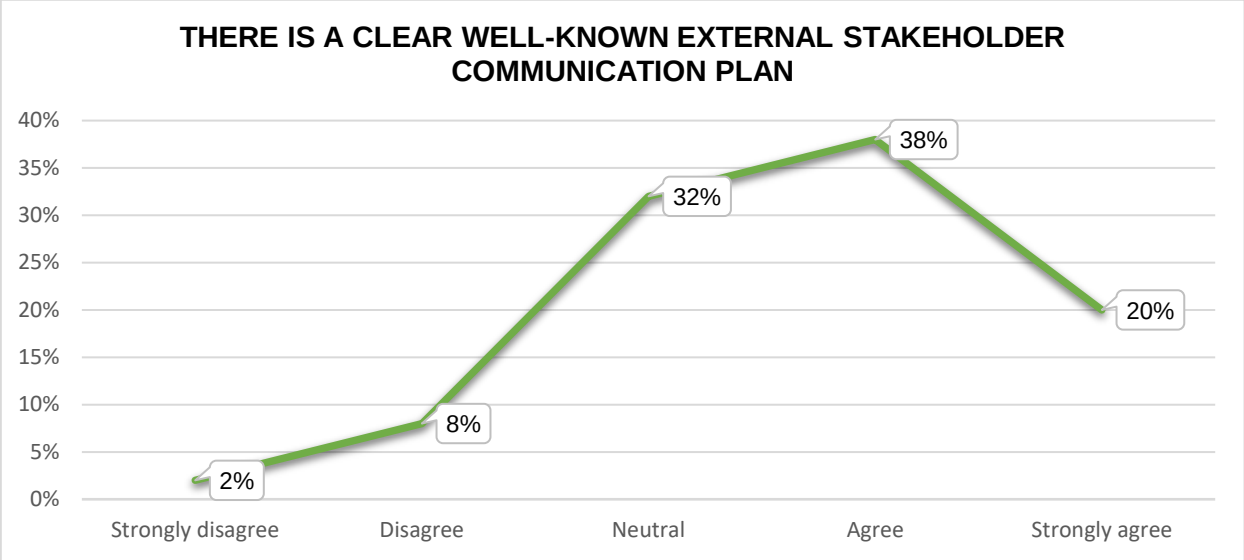
Source: Author's own construction

The vast majority of the respondents, 68%, agreed (46% agreed and 22% strongly agreed) with the above statement, while 16% disagreed (14% disagreed and 2% strongly disagreed) and 16% remained undecided. Based on the results, a conclusion can be made that the majority of respondents are in agreement that the vision and mission of the project is emphasized at all gatherings.

Statement 20: There is a clear well-known external stakeholder communication plan

Response: This statement was presented to ascertain the respondent's opinions on whether a clear and well known stakeholder communication plan exists within their organization. Stakeholder feedback on decisions that may affect them can be obtained by the project team through effective stakeholder communication from both internal and external stakeholders of the firm. Successful project execution depends on having a plan for communicating with external stakeholders. No matter what position you occupy on a project management team, developing a plan for stakeholder communication will enable you to put effective stakeholder communication techniques into practice. Respondents replied as shown in Figure 5.26 below.

Figure 5.26: Respondents perception on external stakeholder communication plan



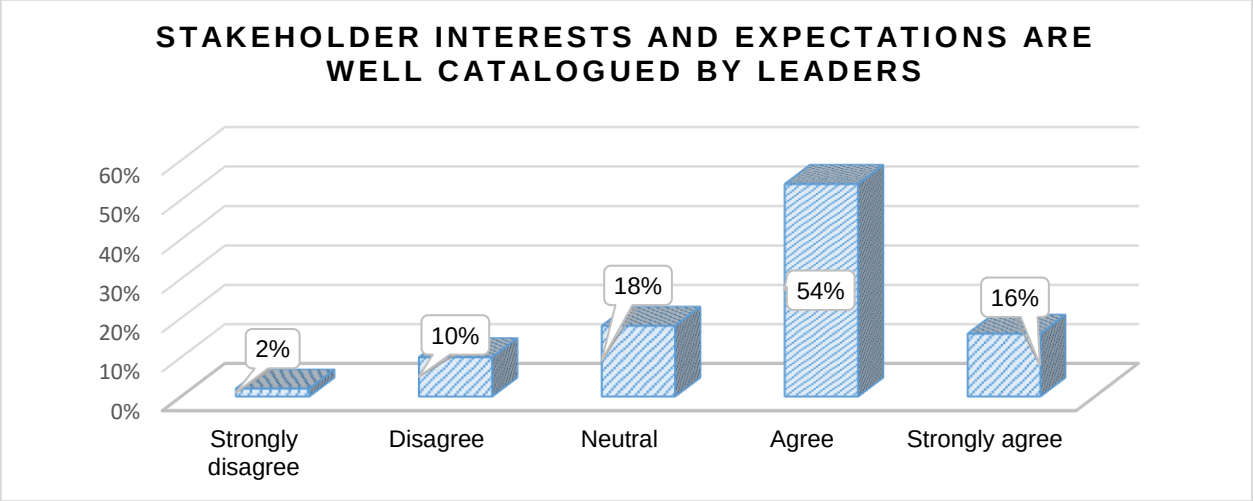
Source: Author's own construction

Of the respondents 38% agreed with the above statement, 20% strongly agreed, a combined total of 10% disagreed (8% disagree and 2% strongly disagree) and 32% were neutral. As a result, it may be concluded that majority of respondents concur that there is a well-defined external stakeholder communication strategy.

Statement 21: Stakeholder interests and expectations are well catalogued by leaders

Response: This claim was made in order to ascertain respondent's comprehension of and cataloguing of stakeholder expectations. Managing stakeholder expectations is a key component of your stakeholder management operations. One of the most crucial and challenging aspects of managing your stakeholders is this. The responses are shown in Figure 5.27 below.

Figure 5.27: Respondents perception on stakeholder expectations



Source: Author's own construction

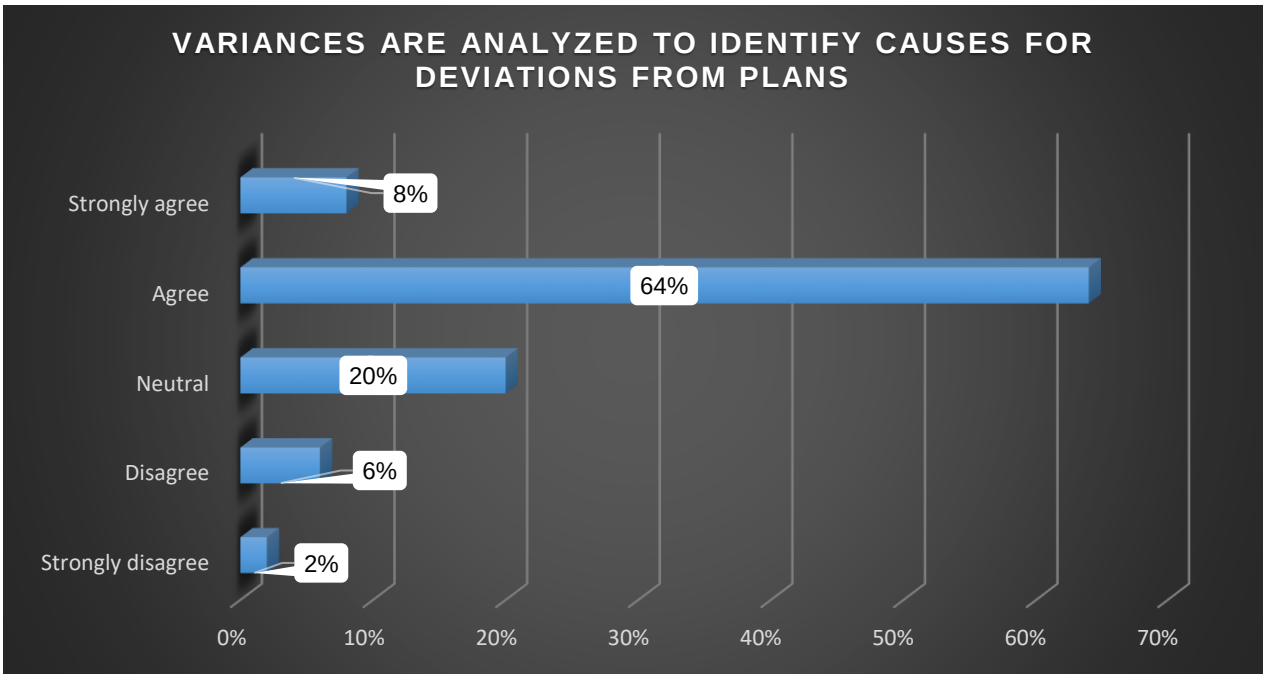
Of the respondent's 70% agreed with the statement above, (54% agreed and 16% strongly agree, respectively), 18% were neutral, a total of 12% disagreed, (10% disagreed and 2% strongly disagreed). Based on the results, a conclusion can be made that the majority of respondents are in agreement that stakeholder interests and expectations are well catalogued by leaders.

MONITORING AND EVALUATING.

Statement 22: Variances are analysed to identify causes for deviations from plans

Response: The aim of this statement was to elicit a response from the respondents regarding their comprehension of the significance of project deviation analysis. Project teams constantly compare actual project data with predicted performance, utilizing the essential technique of project variance analysis. By examining the variations, the project manager and the project team can find and understand performance inconsistencies. Responses from the respondents are shown on Figure 5.28 below.

Figure 5.28: Respondents perception on project deviations



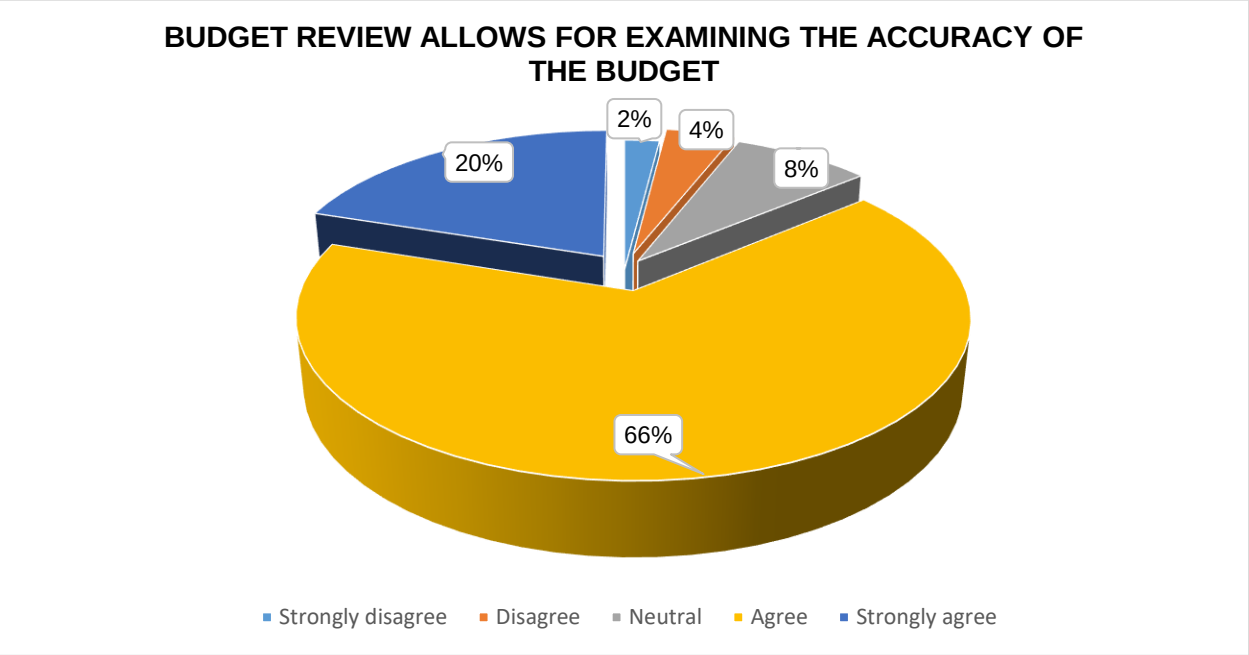
Source: Author's own construction

As shown in Figure 5.28 above 72%, (64% agreed and 8% strongly agreed). Of the respondents 20% were neutral, and 8% disagreed (6% disagreed and 2% strongly disagreed) with the statement. It can be concluded that the statement that project deviations are investigated to understand any deviations from the plans was agreed upon by the majority of respondents. I

Statement 23: Budget review allows for examining accuracy of the budget

Response: Project budgeting is not simply a one-time cost calculation, but an ongoing budgeting procedure for the project that should be worked on continuously. Costs vary, conditions change, and project aspects change. Effective budget management includes taking into account these factors at every stage of a project. This is why budget review is critical during the life cycle of a project. Respondent's responses are shown below in Figure 5.29.

Figure 5.29: Respondent perception on project budget review



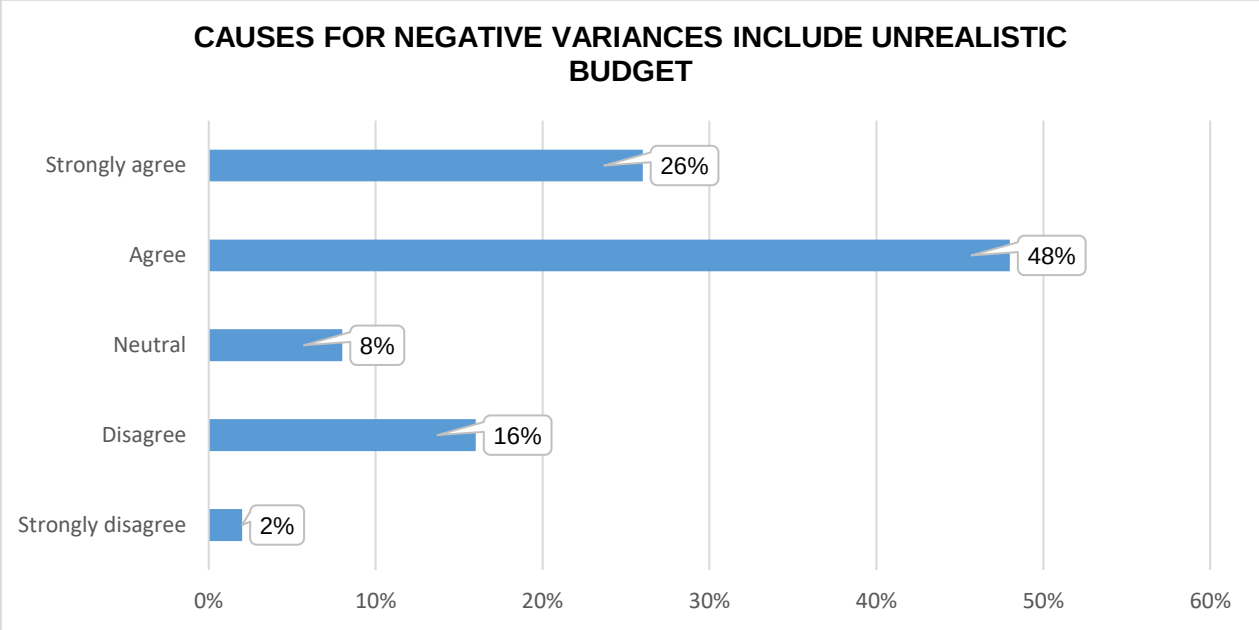
Source: Author's own construction

Figure 5.29 above shows that, 86% of respondents agreed with the above statement (66% agreed and 20% strongly agreed), 6% disagreed (2% strongly disagreed and 4% disagreed), while 8% were undecided. Therefore it can be concluded that the respondent organization allows for budget review in order to examine accuracy of the budget

Statement 24: Causes for negative variances include unrealistic budgets

Response: When a project overspends and costs exceed the projected budget that is referred to as a negative cost variance. Project cost overruns are a serious issue in the administration of government projects. Government project management is more substantial and complex. Consequently, a lot of large-scale, sophisticated systems development projects constantly go over budget and over schedule. Unrealistic budgets is also a contributor to negative variances. Figure 5.30 below shows the responses from the respondents.

Figure 5.30: Respondents perception on negative variance in projects



Source: Author's own construction

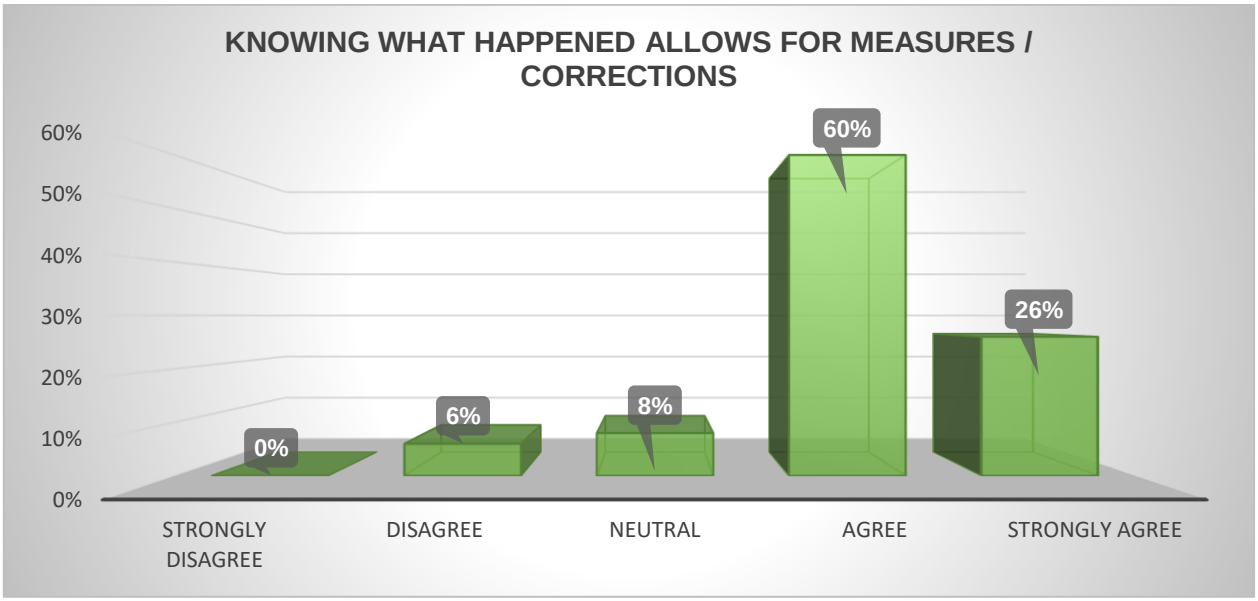
Figure 5.30 above shows that the majority of the respondents, 48% agreed with the above statement, 26% strongly agreed; 16% disagreed and 2% strongly disagreed, 8% were neutral. Based on the responses it can be concluded that the respondent's concur with the statement that the unrealistic budget is to blame for the negative variance.

Statement 25: Knowing what happened allows for measures/corrections

Response: The purpose of the statement was to elicit a reaction from the respondents regarding the significance of change management throughout a project's life cycle. An approach called change management is utilized to deal with any modifications that influence the project's beginning point.

It is a technique for recording changes at each stage of the project cycle, starting from the moment they are detected. This comprises evaluating the request and selecting whether to accept, deny, or defer it. The respondents' responses are shown in Figure 5.31 below.

Figure 5.31: Respondents perception on change management



Source: Author's own construction

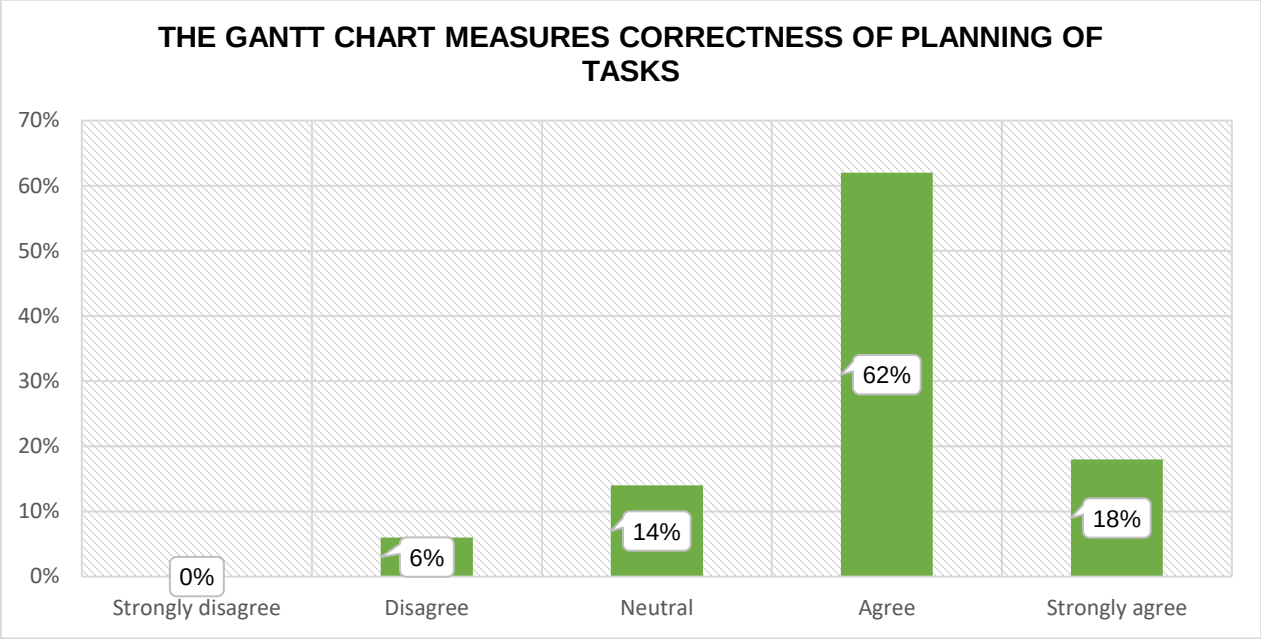
Figure 5.31 shows that the majority of the respondents, 86% agreed (60% agreed and 26% strongly agreed) with the assertion that knowing what happened allowed for measurements and corrections to be done during the project's life cycle, 6% of the respondents disagreed, while 8% were neutral. It can thus be included that huge majority of the respondent agree on knowing what happened in a project allows for correction.

Statement 26: The Gantt chart measures correctness of planning of tasks

Response: A project management tool called a Gantt chart is used to help with project planning, scheduling, and monitoring. A Gantt chart aids in project planning and scheduling, resource allocation, and work delegation. A Gantt chart's horizontal bar graph serves as a visual representation of all data.

The task schedules, dependencies, and progress may be immediately viewed on the chart by project managers and team members. When all tasks are planned in advance and made visible in one place, teams can deliver on time. The responses of the respondents are shown in Figure 5.32 below.

Figure 5.32: Respondents perception on Gantt chart



Source: Author's own construction

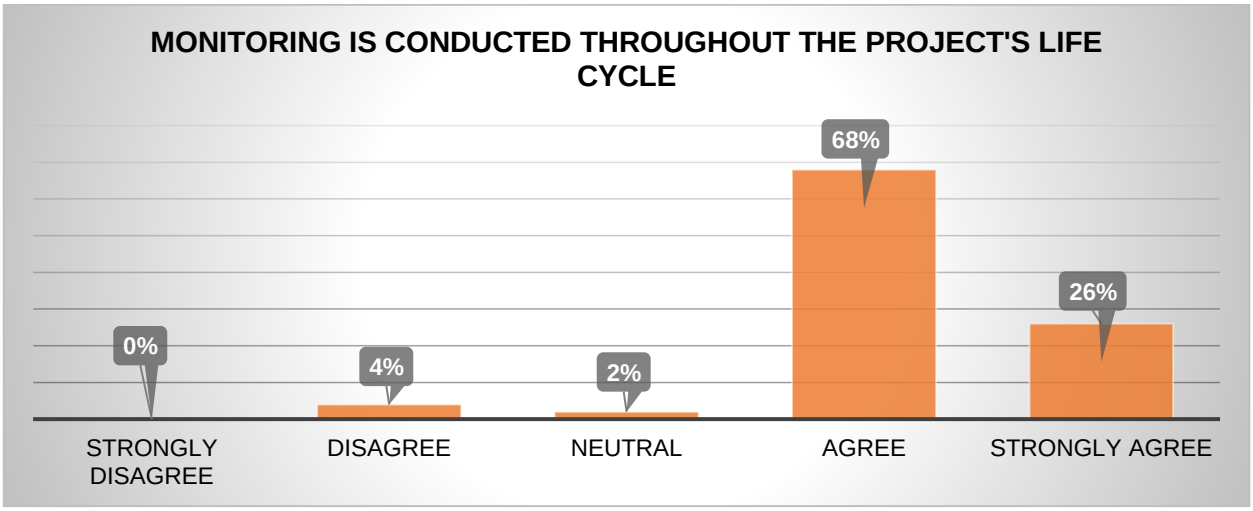
Of the respondents a total of 80% agreed that the Gantt chart gauges the accuracy of the task planning (62% agreed and 18% strongly agreed respectively), 6% disagreed with the statement, and 14% were neutral. It can be concluded based on the responses that the respondeds affirm that Gantt charts are an essential tool for evaluating how well a project's planning tasks are done.

Statement 27: Monitoring is conducted throughout the life project life cycle

Response: The purpose of the statement was to elicit feedback from the respondents regarding the significance of project monitoring. Project monitoring is an essential part of project management. It provides information on the project's performance so that the appropriate corrective measures can be taken when performance dramatically deviates from the expected course.

Project monitoring comprises the methodical, continuing gathering and analysis of data to track the project's execution, in comparison to predetermined goals and targets. When used properly, it is a critical management tool that provides ongoing feedback on the project implementation status and aids in identifying potential challenges and accomplishments, to enable prompt decisions to be taken. The respondent's responses are shown in Figure 5.33 below.

Figure 5.33: Respondents perception on project monitoring



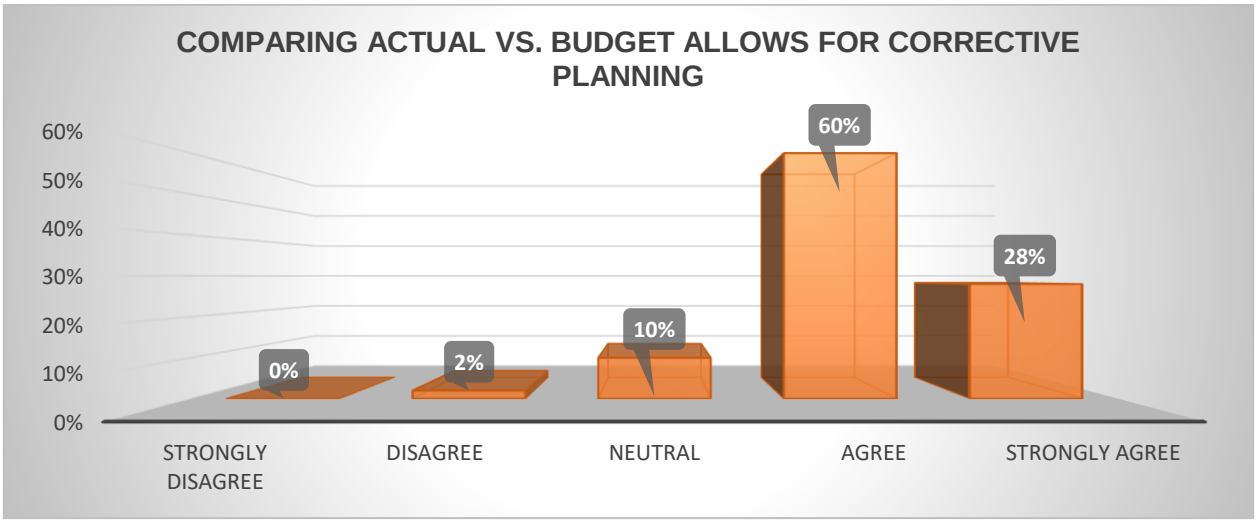
Source: Author's own construction

Of the respondents a combined total of 94% agreed with the statement above, (68% agreed and 26% strongly agree respectively), 2% of the respondents said they were indifferent or unsure, while 4% disagreed with the statement. Therefore, the generalization can be made that the majority of respondents affirm that project monitoring is conducted throughout the respondent's organization.

Statement 28: Comparing actual vs. budget allows for corrective planning

Response: A budget vs. actual variance analysis enables the project team to compare project performance to the project plan, investigate the reasons behind financial outliers, and assist in making smart project management choices throughout the project's life cycle. The respondents' responses are shown in Figure 5.34 below.

Figure 5.34: Respondents perception on actual vs. budget comparison



Source: Author's own construction

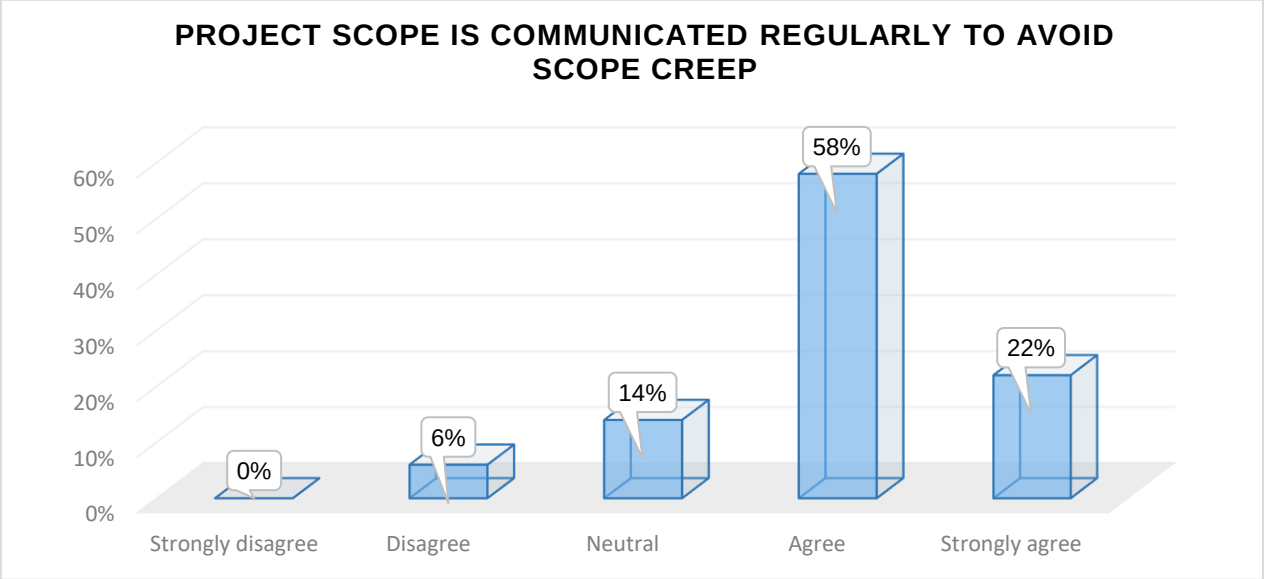
In Figure 5.34 above 2% of the respondents disagreed with the statement, while 10% were neutral, 88% percent agreed that comparing actuals to budget enables corrective planning (60% agreed and 28% strongly agreed). Based on the responses it can be concluded that the responses believe that comparing actuals vs. budget is crucial for corrective planning.

PROJECT SCOPE.

Statement 29: Project scope is communicated regularly to avoid scope creep

Responses: When new project requirements are added by project clients or other stakeholders after project execution has started, this is known as scope creep. The project team must consequently complete more tasks, deliverables, and milestones, while using the same resources and time as the original scope. The changes also have an effect on the project's budget, costs, and resource allocation, which could put milestones and objectives in danger. Scope creep is one of the most common project management problems. The respondent's responses are shown in Figure 5.35 below.

Figure 5.35: Respondents perception on project scope and scope creep



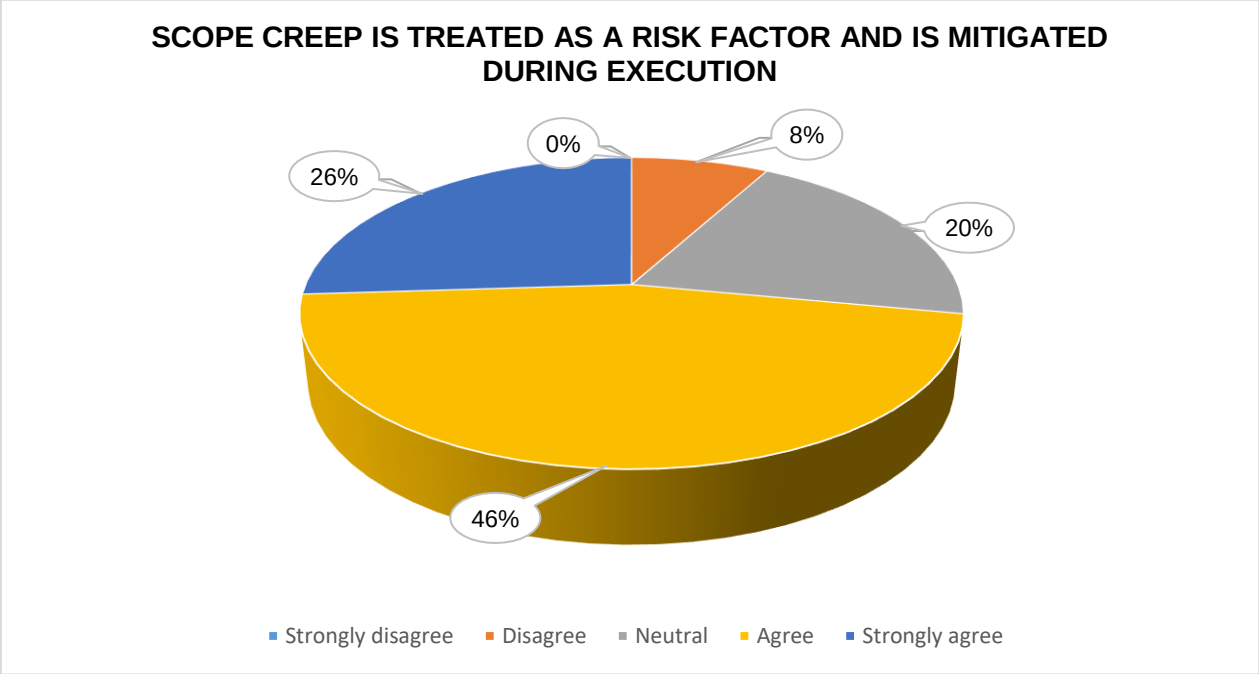
Source: Author's own construction

Figure 5.35 above shows that the majority of the respondents at 80% agreed with the statement that discussing project scope on a frequent basis helps to prevent scope creep (58% agreed and 22% strongly agreed), while 6% disagreed and 14% remained neutral. it can be concluded that the respondents organization does communicate project scope regularly in order to avoid scope creep.

Statement 30: Scope creep is treated as a risk factor and is mitigated during execution

Response: Scope creep is one of the most common project management issues. Scope creep occurs when additional project requirements are added by clients or other stakeholders after the project has started. Often, these modifications are not adequately evaluated. The project team must consequently complete more tasks, deliverables, and milestones while using the same resources and time as the original scope. Figure 5.36 below shows the reaction to this assertion.

Figure 5.36: Respondents perception on scope creep as a risk factor



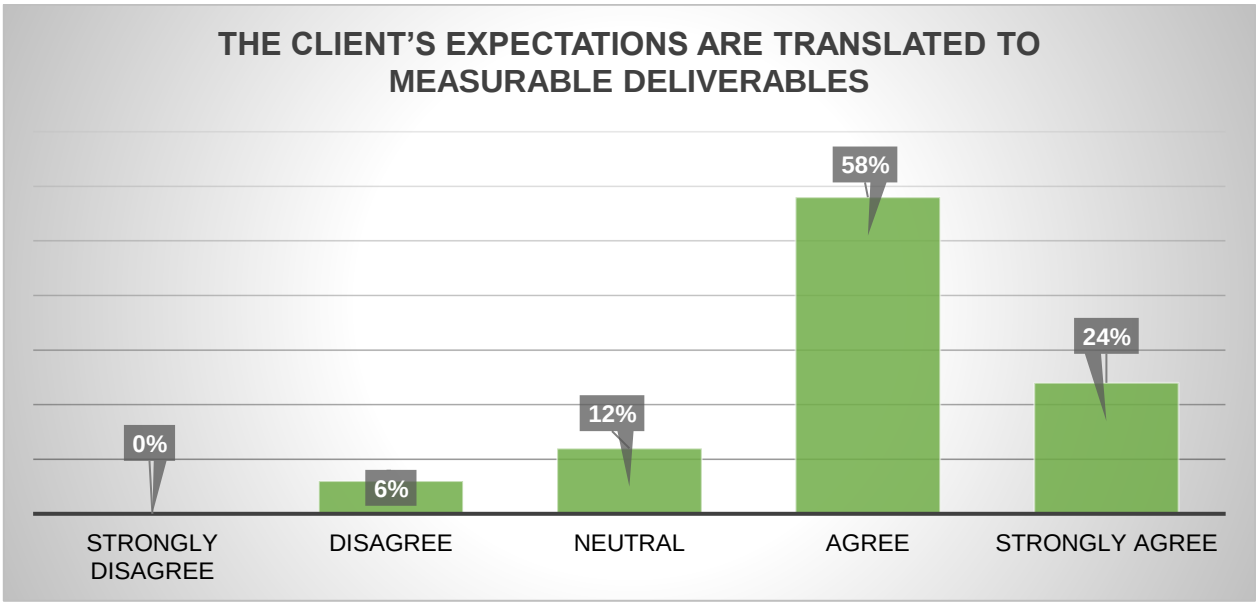
Source: Author's own construction

There was a resounding response where 72% for the respondents were in agreement (26% strongly agreed and 46% agreed). Only 8% of those interviewed disagreed and only 20% remained neutral. Based on responses it can be generalized that scope creep is treated as a risk factor that is mitigated during project execution.

Statement 31: The client's expectations are translated to measurable deliverables

Response: The statement sought to elicit respondent's perception on client expectations and their management. All of the outputs, tangible and intangible submitted as part of a project scope are referred to as deliverables. Translating the client's expectation in measurable deliverables allows for an easy breakdown of all the task to be executed. Figure 5.37 below shows the respondent's responses.

Figure 5.37: Respondents perception on client expectations



Source: Author's own construction

A vast majority of the respondents at a total of 82% agreed (58% agree and 24% strongly agree respectively) that in their organization client expectations are turned into quantifiable outputs; 6% disagreed with the assertion, and 12% were neutral. Conclusion: generalization can be made that majority of respondents believe that the client's expectations are translated to measurable deliverables.

Statement 32: Good managers review and approve deliverables step by step

Responses: The purpose of the statement was to get the respondent's opinions on how crucial it is to review and approve deliverables. A deliverable is any output component that is the result of intentional work completed throughout the project.

A deliverable must be in line with the project's requirements and must contribute significantly to realizing the project's objectives. Step-by-step review and approval of deliverables is best practice and shows excellent management. The responses to the statement in question are shown in Figure 5.38 below.

Figure 5.38: Respondents perception on deliverables review and approval

Source: Author's own construction

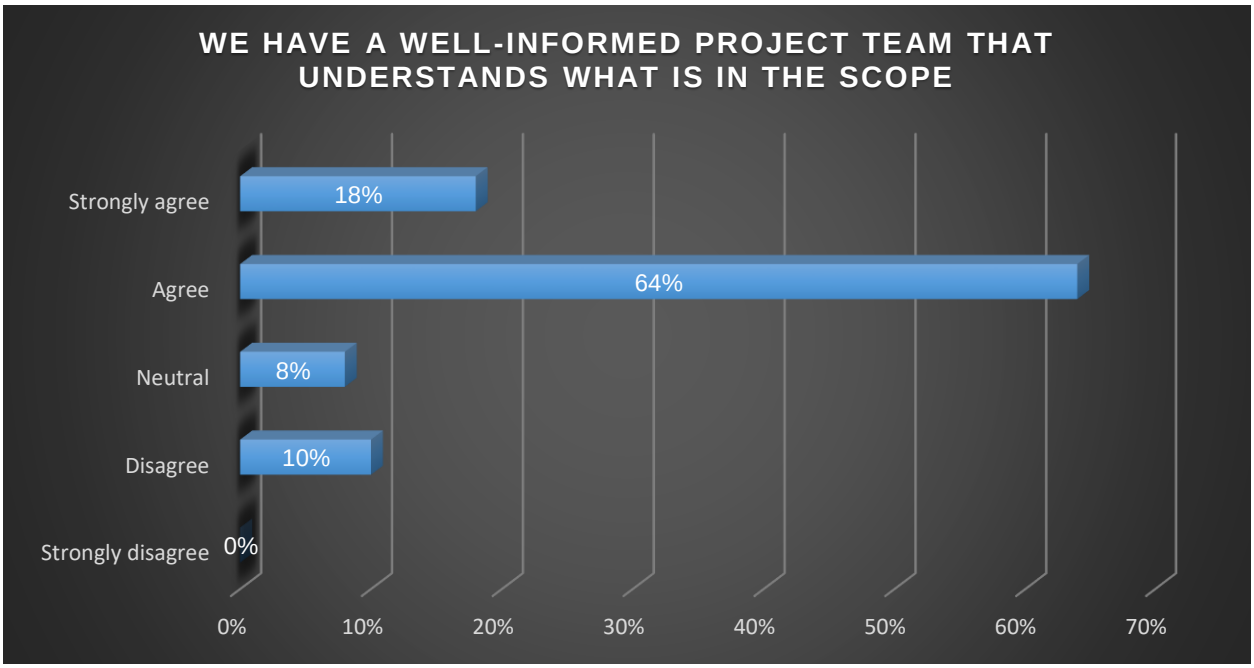
Of the respondents a combined total of 90% were in agreement with the statement above (66% agreed and 24% strongly agreed), 4% of the respondents disagreed with the statement, and 6% were neutral. It can be concluded the respondents agree that its good practice for a manager to review and approve deliverables step by step.

Statement 33: We have a well-informed project team that understands what is in the scope

Response: The term project scope management describes a group of processes that ensures the accurate definition and mapping of a project's scope. Using scope management techniques, project managers and the project team can allocate the right amount of work needed to successfully complete a project.

The main goal of scope management approaches is to control what is and is not included in the project's scope. Having a project team that is aware of the scope is essential. Figure 5.39 below shows the responses.

Figure 5.39 Respondents perception on project team and scope management



Source: Author's own construction

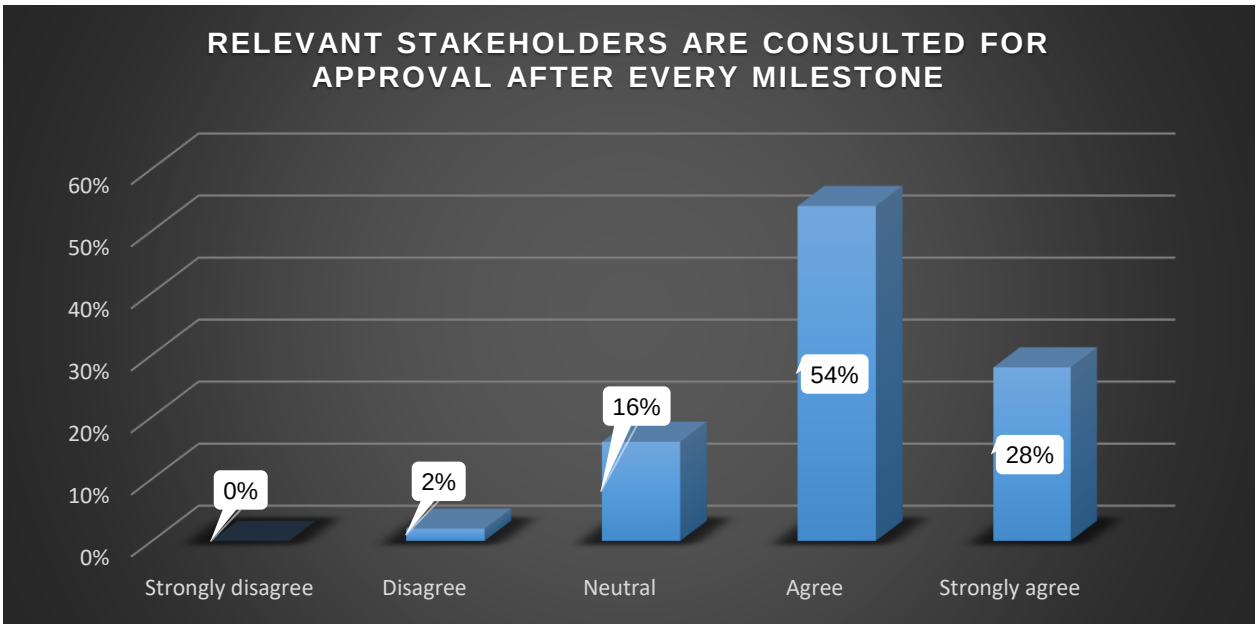
Figure 5.39 above shows that the majority of the respondents 82% agreed (64% agreed and 18% strongly agreed respectively) that their company had a knowledgeable project team that is aware of the scope of the project, while 8% stayed neutral and 10% disagreed. Based on results It can be inferred that the company has a project team that is knowledgeable about the scope.

Statement 34: Relevant stakeholders are consulted for approval after every milestone

Response: A project is considered successful when it achieves its objectives and meets or exceeds the expectations of its stakeholders. Those who are interested in or concerned about your project are its stakeholders. They are the people who actively work on the project or have something to gain or lose from it.

A milestone is a specific time within a project's life cycle that is used to determine how far the project has come towards achieving its goal. In project management, milestones serve as indicators of a project's start and end dates, external evaluations and input, budget checks, the submission of a significant deliverable, etc. A crucial component of stakeholder management is asking the stakeholders for their approval of each milestone, allowing those with vested interests in the project to participate. Figure 5.40 below shows the findings.

Figure 5.40 Respondents perception on stakeholder consultation



Source: Author's own construction

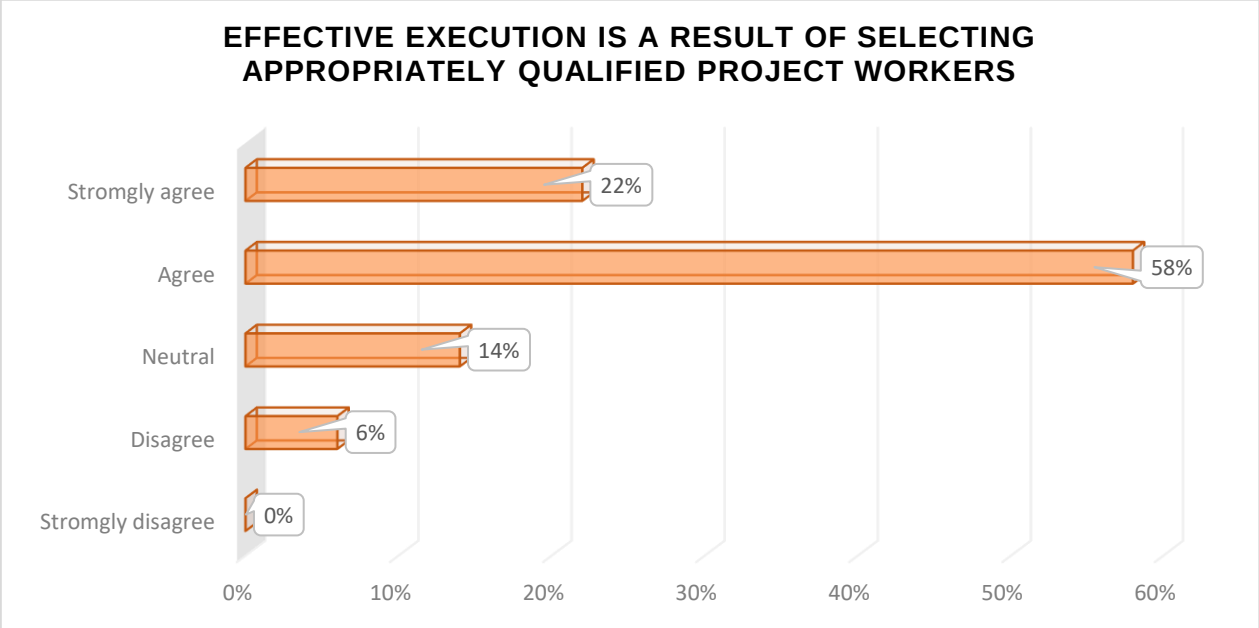
As shown in Figure 5.40 above a vast majority of respondents at 82% were in agreement (54% agreed and 28% strongly agreed) with the statement above that pertinent stakeholders should be consulted before approving each project milestone. Of the respondents 16% remained neutral, while 2% disagreed with the statement. Therefore it can be generalized that the majority of the respondents concurred that each milestone in their business should receive the consent of the appropriate stakeholders.

DELEGATION.

Statement 35: Effective execution is a result of selecting appropriately qualified project workers

Response: The individuals working on a project determine how successful it is. The team in charge of the project is what makes it successful. The stronger the team is, the more successful the project will be. For effective project execution a qualified project team is vital as they will play a huge part in the success of the project. The respondent's responses are shown in Figure 5.41 below.

Figure 5.41: Respondents perception on effective project execution



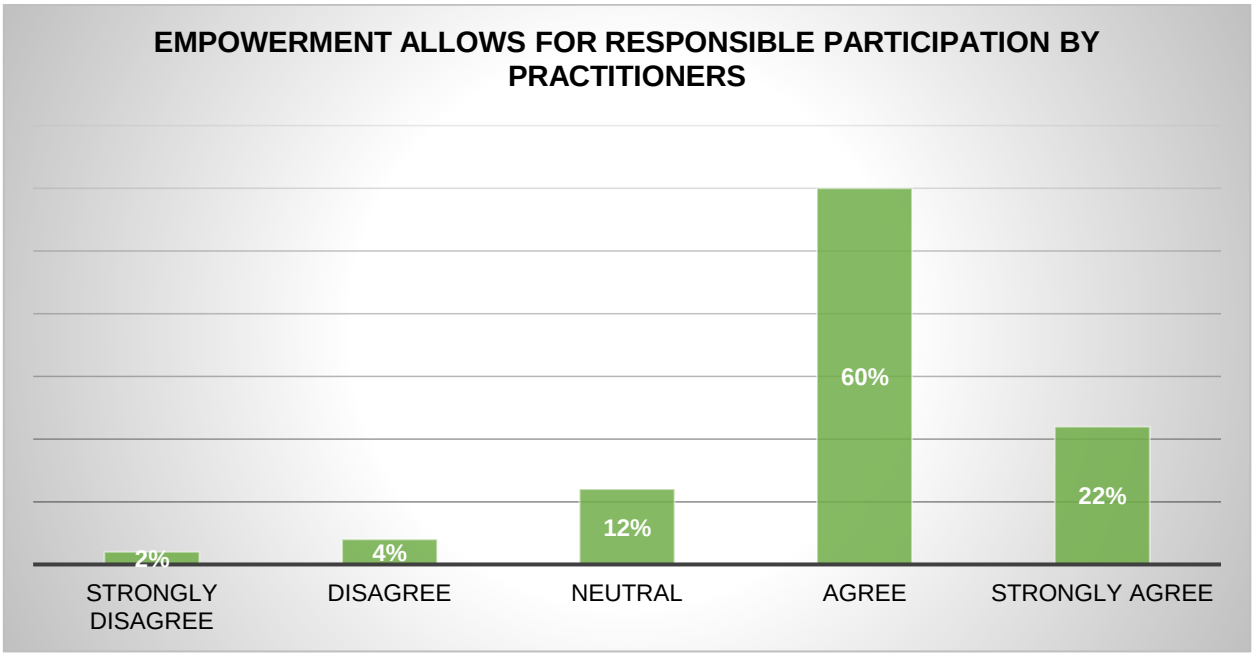
Source: Author's own construction

In Figure 5.41 above, the majority of the respondents at 80% agreed that choosing project personnel who are suitably qualified leads to effective execution (58% agreed and 22% strongly agreed), while 6% disagreed and 14% had no opinion. It can be concluded that the majority of the respondents agree that effective project execution is partly a result of having a qualified project team.

Statement 36: Empowerment allows for responsible participation by the practitioners

Response: The above statement assessed the respondents' perceptions about empowerment of the project team**.** Empowered project teams perform better than those who are less empowered. When decision-making and accountability have been delegated as far as possible, the team is said to be empowered. When a team is empowered, they accept greater responsibility for the results they are expected to deliver. Figure 5.42 below shows the respondents' opinions.

Figure 5.42: Respondents perception on empowered project team



Source: Author's own construction

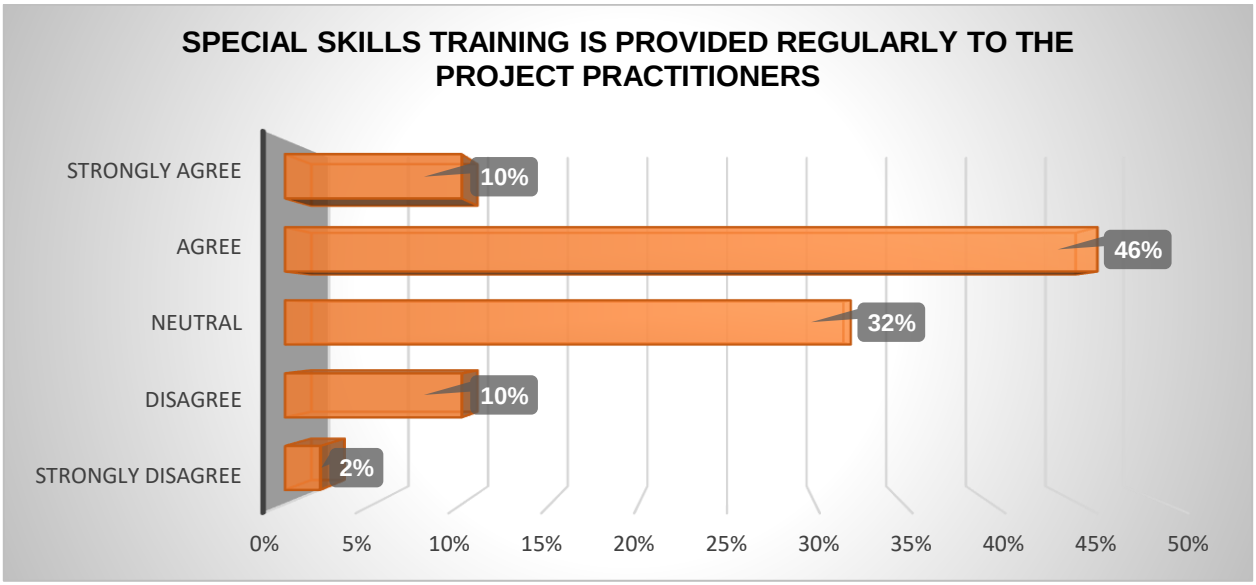
In Figure 5.42 above 82% of the respondents were in agreement (60% agreed and 22% strongly agreed respectively) that empowerment enables practitioners to participate in responsible ways, 6% disagreed (4% disagreed and 2% strongly disagreed respectively) while 12% were neutral. Therefore, a conclusion can be drawn that the respondents believe that Empowerment allows for responsible participation by the practitioners.

Statement 37: Special skills training is provided regularly to the project practitioners

Responses: With the right professional training, project managers and the project team can manage complicated projects, plan efficiently, and take part in a variety of project activities more successfully, including coordinating well and controlling project risks.

Regular training is also necessary for the project team to be able to improve communication and better understand the project team at every stage. Project management training assists a corporation to achieve these important goals by identifying the potential of the project team and employing their abilities to the utmost in achieving the organizational goals. The respondents' responses are shown in Figure 5.43 below.

Figure 5.43: Respondent perception on skills training for project practitioners



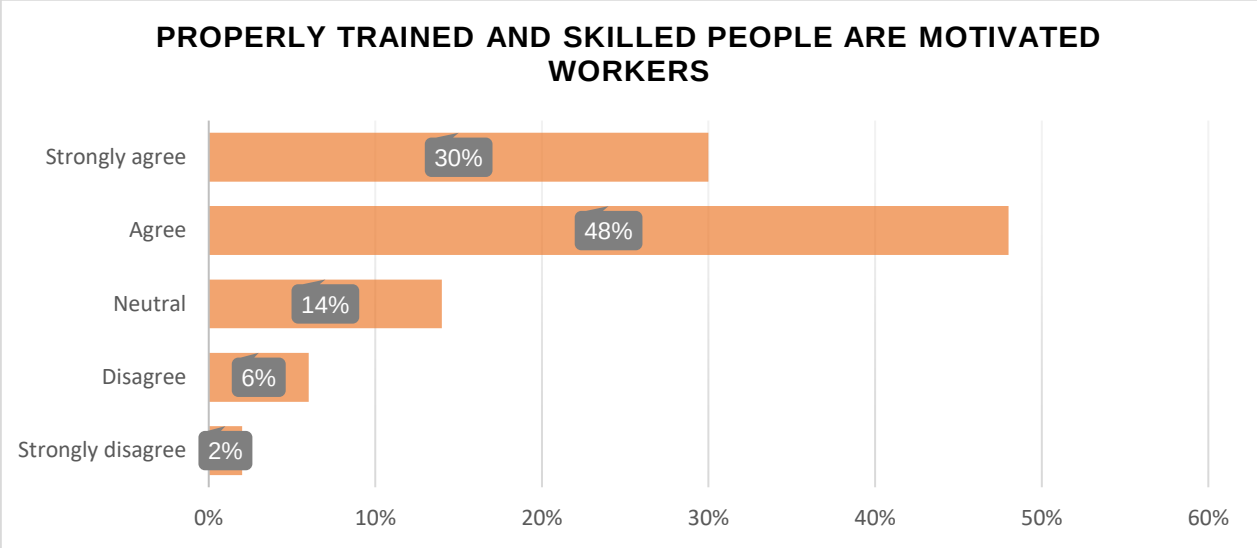
Source: Author's own construction

Figure 5.43 above, shows that 10% of the respondents strongly agree and 46% agreed. Of the respondents 12% disagreed and 32% remained neutral. Conclusion can be drawn that special skills training is provided regularly to the project practitioners.

Statement 38: Properly trained and skilled people are motivated workers

Response: Companies that give their employees access to educational and training opportunities benefit from a more skilled and motivated staff. A properly trained workforce is more productive and less resistive to job changes. Figure 5.44 below shows the responses.

Figure 5.44: Respondents perception on motivated workers



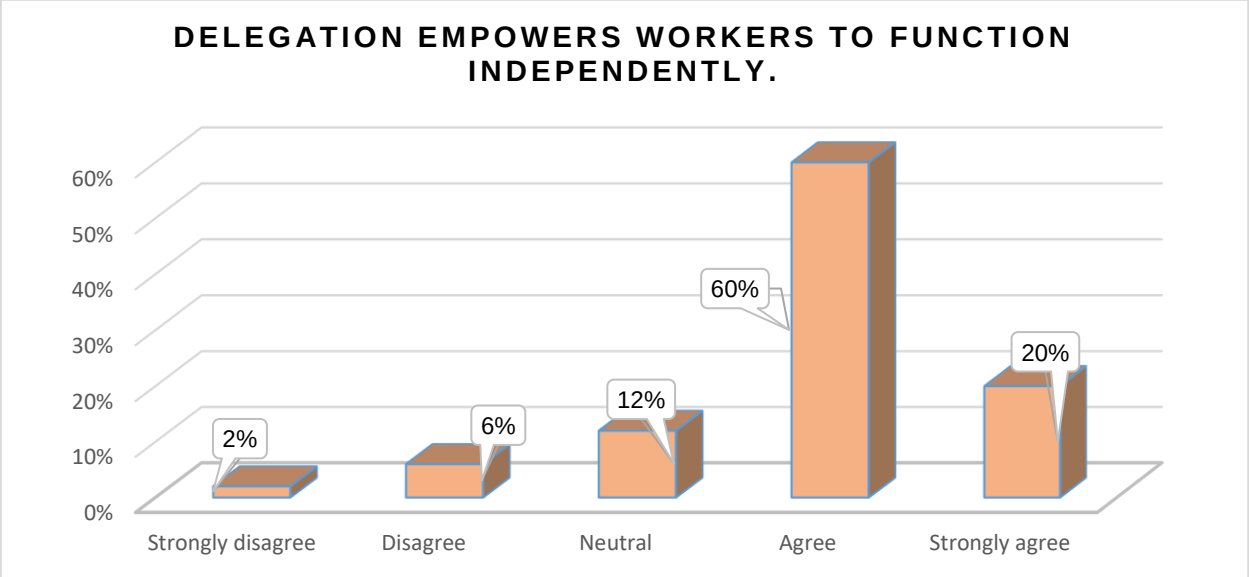
Source: Author's own construction

Of the respondents 48% agreed with the statement above, 30% strongly agreed, 6% disagreed and 2% of the respondents strongly disagreed while 14% had no opinion or remained neutral. Therefore, a conclusion can be drawn from the findings that properly trained and skilled people are motivated workers.

Statement 39: Delegation empowers workers to function independently

Response: Effective project managers are aware of the tasks that should be given to the project team so that they have time to plan, work with others on the project and evaluate the project team's performance. Delegation ensures that the project team not only functions independently but also receives sufficient opportunity for growth. The responses are shown in Figure 5.45 below.

Figure 5.45: Respondents perception on power delegation



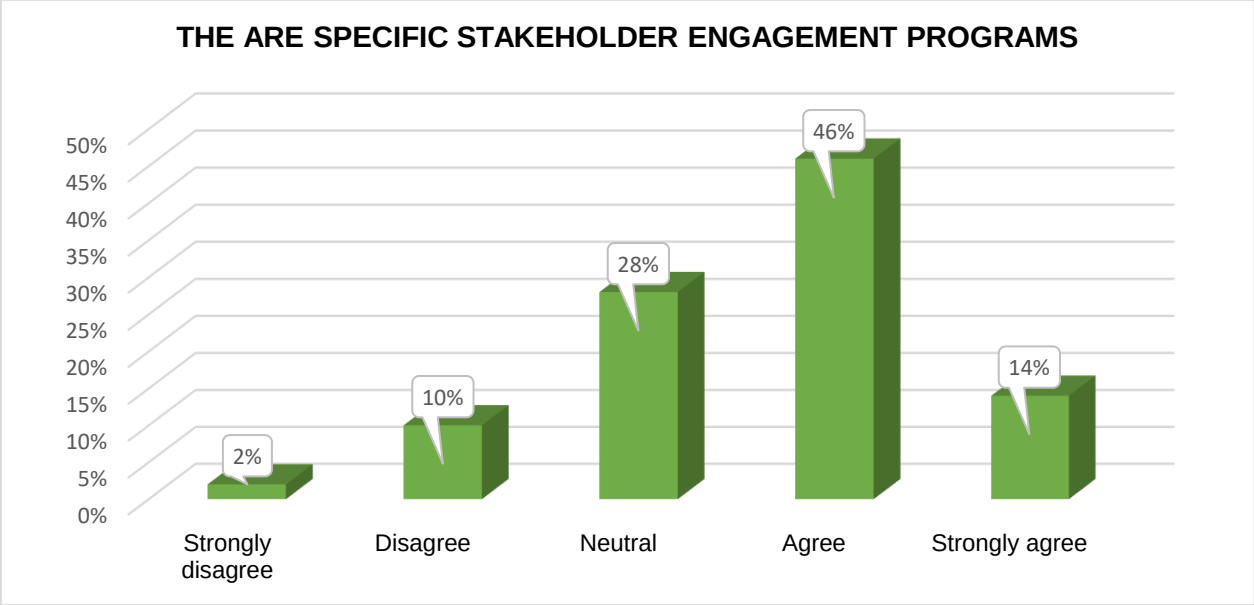
Source: Author's own construction

When asked if delegation enabled employees to operate freely, 60% of the respondents agreed with the statement above and 20% strongly agreed, only 6% for the respondents disagreed and 2% strongly disagreed lastly 12% of the respondents remained neutral. Based on the results It can be concluded that delegation empowers workers to function independently.

Statement 40: There are specific stakeholder engagement programs

Response: Establishing and maintaining relationships is necessary for stakeholder participation. It also requires sustaining the population's involvement and commitment to the project's delivery of change. It is possible to have a positive influence on the change process and deal with issues that could present hurdles to change by understanding stakeholders' aims and aspirations. Programs for engaging stakeholders are essential throughout a project's lifecycle. The response is shown in Figure 5.46.

Figure 5.46: Respondents perception on stakeholder engagement programs



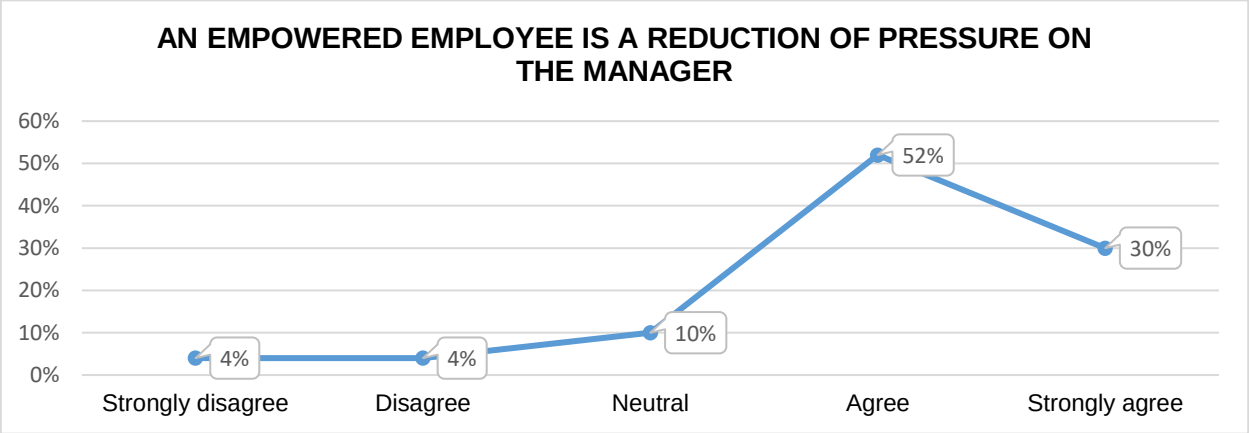
Source: Author's own construction

According to the results, the majority of respondents at 60% agreed with the above statement, (46% agreed and 14% strongly agreed respectively), 10% disagreed and 2 percent strongly disagreed lastly 28% remained neutral. Therefore, it can be concluded that the majority of respondents affirm the existence of specific stakeholder engagement programs.

Statement 41: An empowered employee reduces pressure on the manager

Response: Employee performance, job satisfaction, and loyalty to the company are all improved when employees feel empowered at work. Empowered employees in turn reduce the pressure on the manager and thus the organization benefits. The response is shown in Figure 5.46 below.

Figure 5.46: empowered employees and pressure reduction on the manager



Source: Author's own construction

The results show a combined majority of respondents 82% agreed with the statement that an empowered employee relieves strain on the boss (52% agree and 30% strongly agree), whereas 8% disagreed (4% disagreed and 4% strongly disagreed respectively), and 10% remained indifferent. It can thus be concluded based on data drawn that majority of responded affirm that employee empowerment is a reduction of pressure on the manager.

SECTION C – OPEN-ENDED QUESTIONS

This section was intended to purposely increase the level of conversation among participants by allowing individuals to ask further questions or express any concerns they may have had. No matter how carefully the planning was done, the researcher noted that some difficulties might have been missed when creating the questionnaire. Any topic could come into respondent'' minds within the confines of the study. Respondents were free to think about anything else they wished to mention in the context of the study. The respondents were invited to submit any data relevant to certain study topics. The identical format of a question or statement and an answer was then used to open-up the topic.

QUESTION 1: Provide four [4] things project managers can do to improve project success?

Response: Four lines were given to the respondents to write their answers. Of the respondents 90% responded, while 10% of them left this area of the survey blank. Due to the respondent's varied responses, these responses could not be categorized. There were some responses that caught our attention. The items that came up most frequently are listed below.

Table 5.3: Respondent perception on things PMs can do to improve project success

NO.	PARTICIPANTS' RESPONSES
1	Good stakeholder communication.
2	Assign the correct tasks to the correct individuals.
3	Have risk mitigation plans in place.
4	As a project manager, please listen to the project team.
5	Improve the project planning phase.
6	Proper analysis by using the various systems in place in order to monitor the project success.
7	Review budget against anticipated expenditure and actual expenditure.
8	Become more solution focused in order to manage risks and unforeseen events within the project lifecycle.
9	Ensure legislative requirements are met.
10	Ensure milestones are clear and understood on a month to month basis, by the PM team.
11	Constant review of risks, scope creep, budget and timelines.
12	Better stakeholder communication, Better project planning and strategizing, clear role assignment for project members.

Source: own construction

QUESTION 2: Please provide four [4] ways to improve project execution?

Response: The researcher selected and highlighted the most frequent suggestions on how to enhance project execution, as seen in the following examples in Table 5.4). Of those who responded to the questionnaire 90% filled it out, while 10% did not. The replies were not grouped into clusters; only those that the researcher deemed significant are mentioned here.

Table 5.4: Respondent perception on ways to improve project execution

NO.	PARCITIPANTS' RESPONSES
1	Mitigate scope creep, monitor and measure deliverables and cash flow at all times.
2	Build a high performing team and monitor progress.
3	Stick to approved budget and ensure project quality.
4	Begin project with the End in Mind and Gain Buy-in From Your Core Team.
5	Monitor progress and performance through accountability.

6	Pre-planning of the engagement of resources and contractors and clarification on who has delegated authority if any.
7	Risk identification, communication and resolution.
8	Manage people, follow the processes, communicate information to all main stakeholders and team members, have a proper project plan in order.
9	Empower your team with the necessary skills and training prior to the project execution.
10	Stakeholder management, establish stakeholder engagement framework.
11	Check and identify bottlenecks, have a well-defined scope and/or specifications and proper contract and have sufficient resources (budget, plant/equipment and workforce, professional/consultants and labour).
12	Effective scope management, continuous stakeholder engagement, Effective risk management; and agile methodology practices.

Source: own construction

QUESTION 3: In a descending order, what are the four [4] common causes of project failure?

Response: Four lines were given to the respondents to write their answers. Of the respondents 90% responded, while 10% left this part of the survey blank. Due to the respondent's varied responses, these responses could not be categorized. There were some responses that caught our attention. The items that come up most frequently are listed below.

Table 5.5: Respondent perception on four common causes of project failure

NO.	PARCITIPANTS' RESPONSES
1	No transparency, unclear objectives, poor planning and unrealistic expectations.
2	Starting late, insufficient scope clarification, not all stakeholders identified nor involved and inflexible budget allocation and adjustment.
3	Poor project planning, poor communication plan, poorly skilled project team and insufficient budget.
4	Setting unrealistic timelines, no informing stakeholders of project developments, project team that works in silos and scope creep.

5	Poor performance (project manager, consultants or contractors), bad design, poorly written scope of work and exhausting budget due to poor planning.
6	When a project loses momentum, due to it being put on hold due to budget constraints.
7	Community interference when they were not adequately engaged at the right time.
8	Governance requirements or other approvals that may not have been foreseen.
9	Poor planning, Insufficient resources (budget and labor), contract disputes and contractor defaulting.
10	Project not aligned to organization's mission and objectives.
11	Lack of project governance, lack of digital tools to fast-track delivery (where possible) and uncontrolled project scope throughout project life cycle.
12	Unrealistic time to finish project, no resource allocation, incompetent team and corruption.

Source: own construction

QUESTION 4: In descending order, what are the four [4] leader behaviour patterns that promote effective project execution?

Response: The researcher chose the twelve most common components and highlighted them to illustrate four leadership behaviour patterns that would aid in project execution (see Table 5.6 below). The questionnaire was completed by 90% of the respondents, while only 10% did not. The replies were not grouped into clusters; only those that the researcher deemed significant are mentioned here.

Table 5.6: Respondent perception on four leader behaviour patterns to promote project execution

NO.	PARCITIPANTS' RESPONSES
1	A project manager must welcome mistakes in order for the team to learn, in project management you only learn by mistakes.
2	Problem solving, positive attitude, strong decision making and integrity.
3	Ownership, timeous decision making, progress meeting presence and decision support based on system / reported data.
4	Directive, participative, charismatic and supportive.
5	Inspiring team members, leading with example, motivating, and being goal oriented.

6	Create positive atmosphere within team members, delegate work appropriately among team members, good communication plan and good project planning.
7	Engaging with the employees and be clear about requirements. Do not add another mini project to the project you are currently busy with.
8	Trusting the team for different tasks, continuous engagement with team members, treating everyone equally and eliminating ambiguity when setting up goals.
9	Understanding the amount of work to be done vs the actual work completed (Progress of the Project).
10	Communication, servant leadership, decision making and problem-solving attitude.
11	Delegation of activities to grow team members, train team members for team building to address rework and clear performance agreement in place.
12	Know your project well, ask the right questions, identify risks and issues early, and mitigate / resolve them early too. Review methods, activities and processes to achieve milestones.

Source: own construction

5.4 Chapter Summary

Participants in the study had the option to revoke their participation at any time during the survey. They (the volunteers) were informed right away that they had the option to decline taking part in the study and that doing so was entirely up to them. This chapter has succinctly and clearly outlined all the conclusions that came from responders. To help the reader comprehend what this chapter is about, all of the questions and statements from the questionnaire are presented in tables and graphs. However, the answers to the questions posed were evaluated appropriately. The final summary of the findings, recommendations, and conclusions is provided in the following chapter.

CHAPTER SIX:
RESEARCH FINDINGS, RECOMMENDATIONS AND CONCLUSIONS

6.1 Introduction

This chapter provides an overview of the research findings that were covered in the preceding chapter. First, the overview of earlier chapters was used to discuss a review of several important elements. Additionally, the focus of this chapter is split between the researches findings and the author's interpretation of them.

The main objective of the research was to ascertain the link between organizations' PM Maturity and Project Success as it relates to successful project execution. There are several approaches to measure project management maturity, but they are all focused on determining the extent to which the organization employs a standard method for project management.

Project maturity is the creation of systems and procedures that occur in nature and offer a high probability that each project will be successful whenever those systems and procedures are repeated. For determining whether businesses are prepared to complete projects successfully, numerous project management maturity models have been proposed during recent years.

This chapter summarizes the main points of the study in order to show how it fulfilled its goal. The chapter summaries are restated. Additionally, key conclusions and their interpretations are reiterated; which then leads to the conclusions and the suggestions for future studies.

6.2 Summaries of Chapters One To Six

For convenience, the summaries of chapters one through five are restated below.

Chapter one: This chapter introduced the study concept, which comprised the literature review, the problem statement, the research objectives, research questions, and research technique. Data collection, sample technique, target population, and sample selection were all discussed. The study's ethical implications were also looked at.

Chapter two: The definition of project success as it applies to project management was covered in length in this chapter. The author also talked about recent research on project failure and essential success elements. The author went on to highlight the distinctions between project management success and project success.

Chapter three: In this chapter the project management maturity was defined and discussed. The purpose and benefits of project maturity were explored. The chapter conducted an extensive review on the literature with respect to project management maturity, and its relationship to project success. The researcher further discussed the limitations of project management maturity as well as an in-depth review of the available project maturity models that exist today.

Chapter four: Contained a comprehensive discussion of the research design and methodology. The researcher emphasized the importance of the research design and methodology in connection with the project objectives and the description of the problem. The study's selection criteria, including the target population, sample size, sample frame, and sampling methodologies, were also discussed. This chapter also included information on data collection, data collection methods, and data modification and analysis tools.

Chapter five: In this chapter, the findings were looked at, assessed, and presented. The data gathered from each participant in the study was visualized using bar charts, histograms, pie charts, tables, and other methods of data visualization. Participant'' responses were represented by images of bar charts, pie charts, graphs, and tables, which were placed into the questionnaire. The results were then analysed by the researcher.

Chapter six: focuses on the findings summary from chapter 5. The findings in chapter 5 serve as the foundation for conclusions and suggestions. The three components of the questionnaire are Sections A, B, and C.

6.3 Summary of Findings, Conclusions and Recommendations

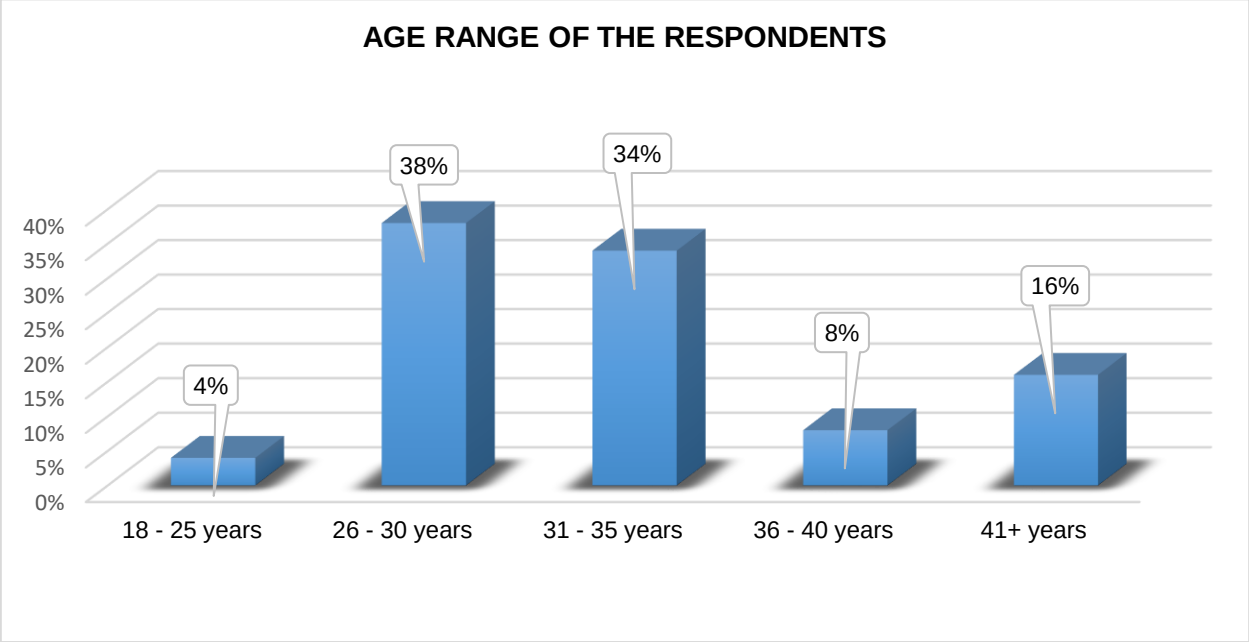
The previous chapter went into great detail about each questionnaire item, and in this chapter the researcher will make recommendations and draw conclusions about the key findings and results described in Chapter five. The basis for recommendations and findings should be the researcher's understanding and interpretation of the data that was gathered and analysed.

6.3.1 Section A – Biography

Section A of the questionnaire asked about the biographical details of the respondents. The answers were presented for statistical evaluations and to confirm the validity of the research sample as a representative sample of the population.

Question 1: How old are you this year?

Figure 6.1: The age range of respondents



Source: Author's own construction

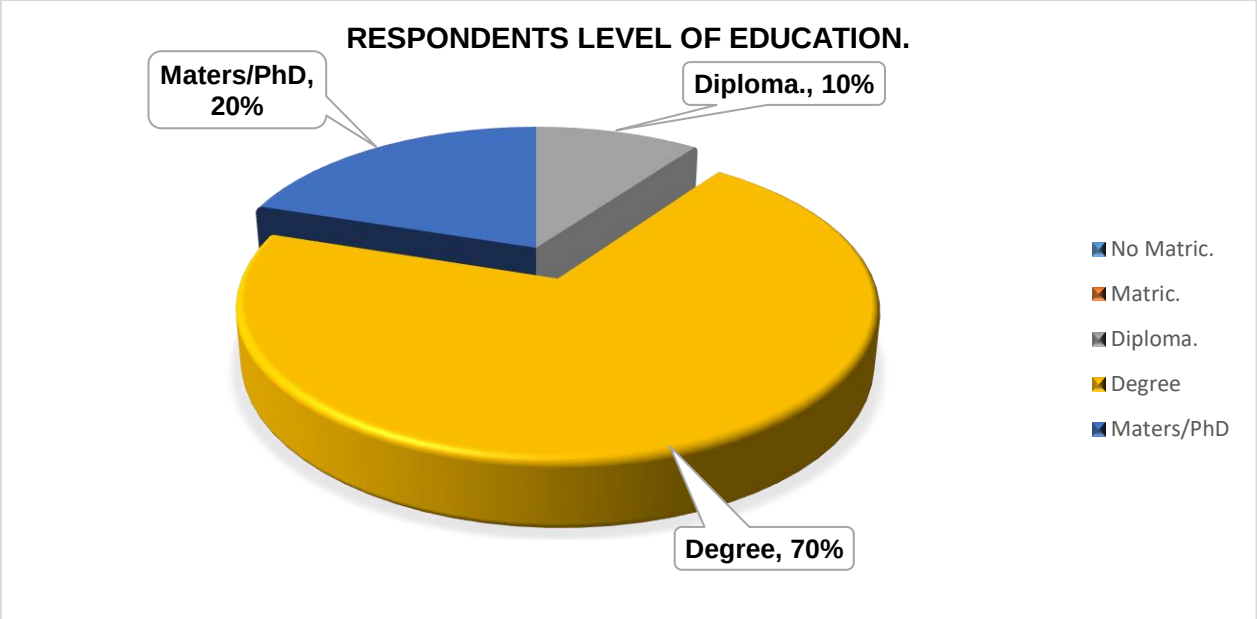
Conclusion: According to Figure 6.1 above, 4% of respondents were between the ages of 18 to 25; 38% of the respondents were between the ages of 26 to 30; while 34% of the respondents were between the ages of 31 to 35; 18% were between the ages of 36 to 40; and lastly 16% were over the age of 41. The majority of study participants are between the ages of 26 to 30, while a small number are between the ages of 18 to 25.

The main goal of this inquiry was to determine the typical age of the project execution team members. Despite the fact that this may not have much of an impact on a person's ability to carry out or manage project processes.

Recommendation: Based of the above data it can be seen that those between the ages of 18 to 25 years account only for 4%. It is recommended that the organization invests more resources in recruiting and training project practitioners who are between 18 and 25 years old.

Question 2: What is your level of education?

Figure 6.2: Respondents level of education



Source: Author's own construction

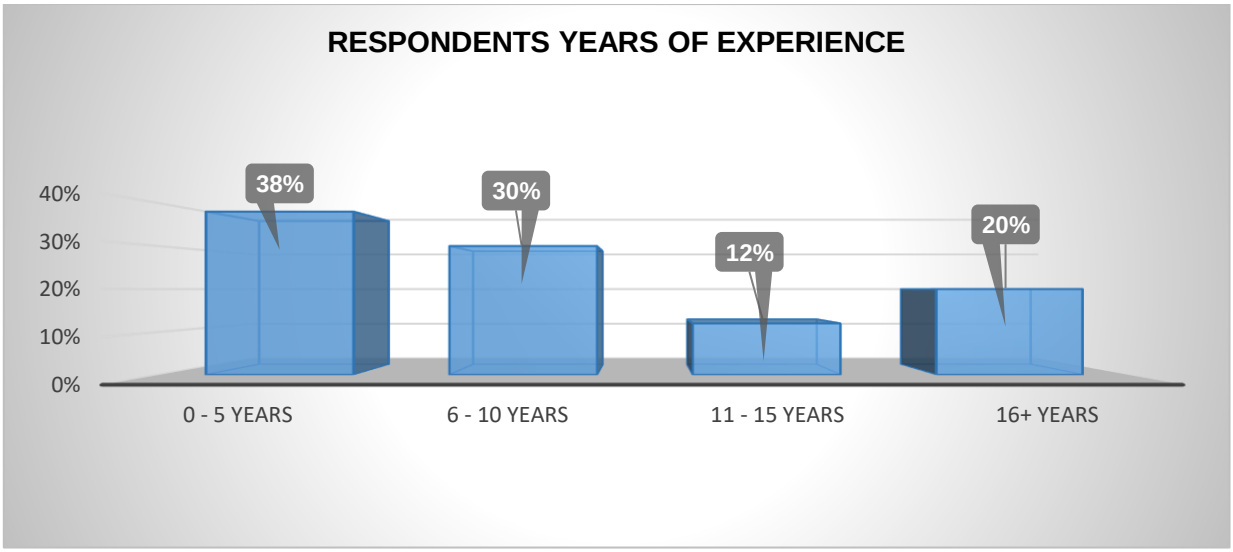
Conclusion: The majority of responders 70% have a bachelor's degree, 20% have a master's degree and 10% have a diploma.

Based on the data, it is evident that 100% of participants stated they have professional credentials, such as a college diploma or degree. Previous research has shown that project team members perform more effectively in projects when they have some kind of official qualification, which then helps the project to succeed and helps the team to operate effectively.

Recommendation: The project crew must have formal education and training in order to carry out all the tasks assigned to them (certificate, degree, and diploma). It is thus recommended that organizations continue to hire project team members who have some form of formal education as a basic requirement.

Question 3: How long have you been working, including your previous occupation?

Figure 6.3 Respondents years in current occupation

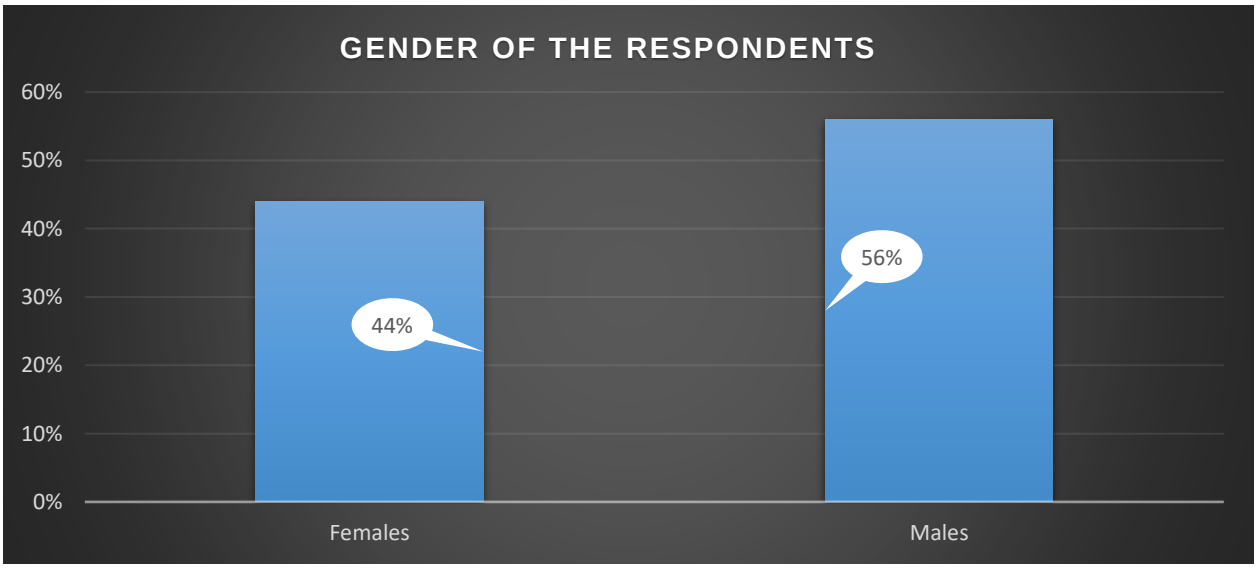


Source: Author's own construction

Conclusion: The participants varying years of work experience are shown in Figure 6.3 above. Of the respondents 38% have less than five years of job experience, 30% have between six and ten years' experience, 12% have between eleven and fifteen years, and 20% have more than sixteen years of experience.

Question 4: What is your gender?

Figure 6.4 Gender of respondents



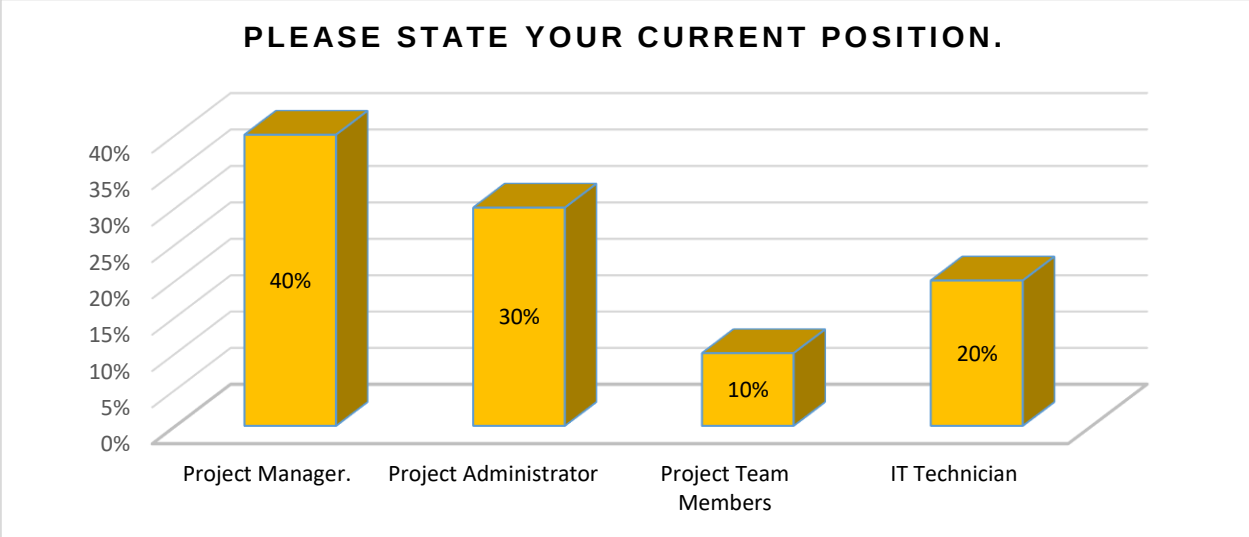
Source: Author's own construction.

Conclusion: The results of the study on this claim are shown in Figure 6.4 above. Male respondents made up 56% of the sample, while female respondents made up 44%.

Recommendation: The above figure reveals a modest gender gap where males are slightly more represented. It is recommended that the organization puts effort into balancing the gender gap within the organization.

Question 5: Please state your current position?

Figure 6.5: Respondents response on current position

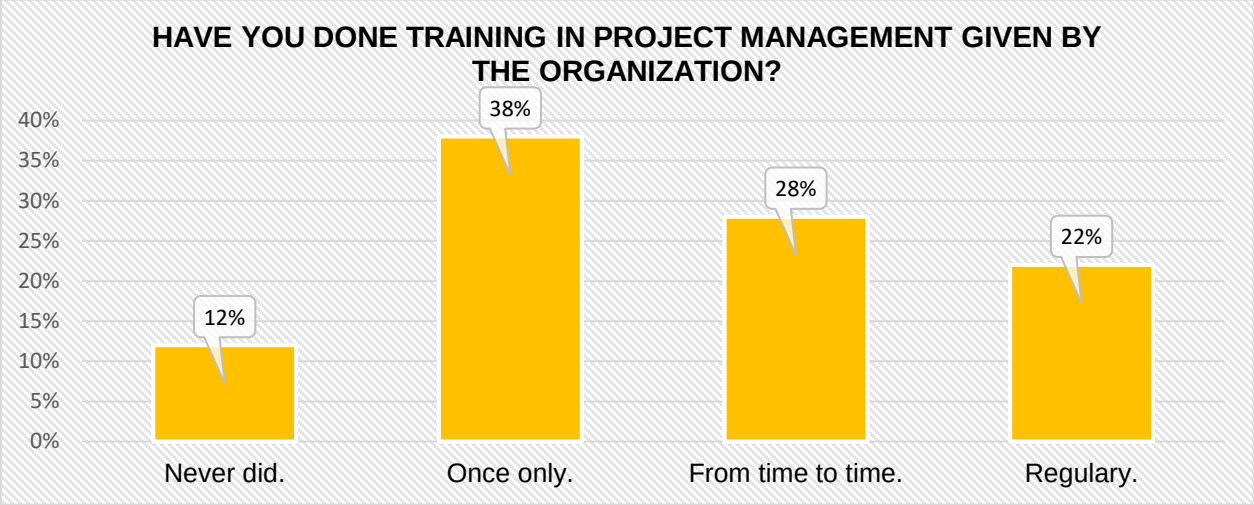


Source: Author's own construction

Conclusion: In Figure 6.5 above, the majority of respondents at 40% held the position of project manager, 30% held the position of project administrator, 10% were project coordinators and 20% were IT technicians.

Question 6: Have you done training in Project Management organized by the organization?

Figure 6.6 Project management training provided by organization



Source: Author's own construction

Conclusion: Figure 6.6 above shows that 38% of the respondents said that they had received project management training provided by their organization only once, 28% said that they had received training from their organization from time to time, and 12% of the respondents stated that they had never received any form of project management training provided by their organization. Only 22% of the respondents stated that they have received project management training on a regular basis from the organization. Hence, a conclusion can be drawn that the organization is not consistent in regularly providing formal project management training.

Recommendation: Thus, it is recommended that the organization should put more effort into providing formal project management training to project practitioners in their organization. Providing such training regularly and consistently will assist the organization with keeping up with the latest developments and innovations within the project management landscape.

6.3.2 Section B – The Likert Scale

The Likert scale can be used to determine how people feel about certain concepts, attitudes, and values. These characteristics are measured on a scale. They serve as a source from which to determine the most recent ideas and perspectives on the subject of this study. The scale has five possible values: 1 for strongly disagree, 2 for disagree, 3 for neutral, 4 for agree, and 5 for strongly agree. Because the answers to these questions were covered in detail in the Chapter five, this section provides an overview of the findings, conclusions, and recommendations.

PROJECT MANAGEMENT MATURITY

Table 6.1 below shows the information collected to show project management maturity and presents the data gathered regarding aspects that determine project management maturity.

Table 6.1: Project management maturity

PROJECT MANAGEMENT MATURITY	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Project execution is always done and completed within planned time.	4%	28%	16%	46%	6%
We always complete project execution processes within the budget.	8%	20%	22%	40%	10%
The quality specifications are always achieved without any reworks.	4%	26%	28%	36%	6%
The team works together to develop ideal project competences.	2%	2%	12%	62%	22%
We have a clear strategy for selection and control of project portfolios.	2%	8%	14%	54%	22%
There is an ability in place to plan, execute and effectively complete processes.	0%	2%	4%	66%	28%
The admin system is well positioned to efficiently execute programs.	0%	12%	12%	64%	12%
There are remarkable competences in initiating and executing projects.	0%	8%	22%	54%	16%
My organization understands the complexities of defining good project goals.	0%	8%	12%	60%	20%
My organization provides good IT support access for all projects.	2%	2%	8%	62%	26%
Appropriately qualified personnel are always assigned to do the tasks.	2%	6%	28%	52%	12%
Resource allocation is a critical element of effective execution success.	2%	4%	8%	42%	44%
Risk assessment is a critical element of the project execution process.	2%	6%	6%	40%	46%
We use modern tools and techniques to priorities good projects.	2%	8%	18%	52%	20%
The project office individually tracks all ongoing projects continuously.	2%	6%	20%	56%	16%
Prompt decision making & feedback is encouraged to avoid delays.	4%	6%	16%	52%	22%
Constant workshops are conducted to help project portfolio selection.	2%	6%	30%	52%	10%
The communication plan is displayed for all practitioners to understand.	2%	10%	20%	56%	12%
The vision and mission of the project is emphasized at all gatherings.	2%	14%	16%	46%	22%
There is a clear well-known external stakeholder communication plan.	2%	8%	32%	38%	20%
Stakeholder interests & expectations are well catalogued by leaders.	2%	10%	18%	54%	16%

Source: own construct

Conclusion:

- Of the respondents 52% agreed that the organization completes projects execution within the planned time, 50% stated that project execution is always completed within the planned budget, 50% of the respondents agreed that their organization completes project execution on budget. Thus, it can be concluded that all the statements from the respondents show that the organization has a good project management maturity level.
- Of the respondents 70% strongly agreed that the organization management of stakeholders is thorough. Stakeholders are thoroughly identified, including both supportive and unsupportive stakeholders. Of the respondents 66% also agreed that the project management team makes use of relevant individuals and a communication plan to engage with stakeholders, and that stakeholder information is often updated.

  Additionally, communications take place and best efforts are made to use all acceptable channels. Furthermore, it can be concluded that the organization has a good project management maturity level because stakeholder management and communication is a critical part of successful project execution.
- It can also be concluded that the organization has a strategy that governs project selection and execution. Of the respondents 76% agreed with the statement that the organization has a clear strategy for selection and control of project portfolios, 96% agreed that their organization had the ability to plan, execute and effectively complete processes. This indicates that the organizations that were examined have a good project maturity level which correlates with the assertion that the organizations concerned were able to successfully execute their projects. This proves that there is a positive correlation between project management maturity and successful project execution within the municipalities that were examined.
- Having analysed all the above statements from the participants, it can thus be concluded that overall, the organizations that were examined had achieved a comfortable level of project management maturity, in that nearly all of the projects followed fully specified and recorded processes that are regarded as reaching acceptable organizational standards. The tools that are needed for successful project management are available and are common to all projects. The project management office, project finance, strategic planning systems, and scope management process are all connected with the schedule management processes.

That leads to the conclusion that successful project execution within municipalities is positively correlated with organizational project management maturity. In all the metrics used for procuring the above statements the respondents were in strong agreement and thus it can be concluded that the organizations under review have a good project management maturity level and that the objective of the study has been determined.

Recommendation: It is recommended that the organization should be aware that there is no one-size-fits-all project maturity level. The appropriate level of project management maturity will be determined by the organization's objectives, the project management methodologies adopted, and the resource capabilities, scope, and requirements of each organization. Understanding an organization's maturity level is crucial since it indicates how well it will adapt to change and how successfully it will execute projects.

After the organization achieves its objective as far as project maturity is concerned, it is critical for the organization to recognize that there is always potential for development and progress. It is also critical to constantly review the organizations project management procedures, plans, methods, and objectives frequently. Thus it is recommended that organizations focus on continuous improvement which will in turn increase their project management maturity, which in turn will result in successful project execution.

To help businesses and other organizations to assess the use of typical project management approaches and the significance associated to the use of formal project management methodology inside their companies; a number of project management maturity models have been proposed. Such an evaluation enables businesses to compare themselves appropriately to other businesses, both inside and outside their industries. The use of maturity models is acknowledged as a strategy whereby businesses can meet their project objectives. It is thus recommended that organizations look into utilizing some of the models described herein, to enable organizations to continue to assess and further improve their maturity levels.

In conclusion it is therefore recommended that Municipalities should adopt a more comprehensive strategy that emphasizes improving the competencies of individual project managers, so that they are then able to continue to grow their project management practices.

PROJECT MONITORING AND EVALUATING

Table 6.2 below shows information collected for project monitoring and evaluating.

Table 6.2: Project Monitoring and Evaluating

PROJECT MONITORING AND EVALUATING	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Variances are analysed to identify causes for deviations from plans.	2%	6%	20%	64%	8%
Budget review allows for examining accuracy of the budget.	2%	4%	8%	66%	20%
Causes for negative variances include unrealistic budget**.**	2%	16%	8%	48%	26%
Knowing what happened allows for measures / corrections.	0%	6%	8%	60%	26%
The Gantt chart measures correctness of planning of tasks.	0%	6%	14%	62%	18%
Monitoring is conducted throughout the life project life cycle.	0%	4%	2%	68%	26%
Comparing actual vs. budget allows for corrective planning.	0%	2%	10%	60%	28%

Source: own construct

Conclusion:

- Regarding project monitoring, based on the findings that 94% of the respondents agreed that their organization practised project monitoring throughout projects' lifecycle. It can be strongly concluded that organizations positively conduct monitoring to clarify project objectives, and project activities to ensure that effective utilisation of their resources can lead to achieving their objectives. Achieving objectives should then be rated by using performance indicators. Organizations can then routinely collect data on these indicators.
- When they compared the results achieved with the set targets 86 percent of the respondents were in agreement that their respective organizations conducted budget reviews in order to facilitate examinations of their budgets.
- That conclusion may also be drawn from the fact that all the respondents concurred that their respective organizations utilized monitoring to check how their program or project was doing at any time (or over time) when compared to their organizations aims and outcomes. The various organization used monitoring to focus particularly on efficiency, and the use of resources. This became evident when it was discovered that 70% of the respondents agreed that their organization analysed variances to identify the causes of deviations from

plans. Additionally, 96% of the respondents agreed that monitoring was conducted throughout their project's life cycle.

- Further investigations showed that the organizations utilized evaluation to analyse why desired results in the various projects were or were not achieved. The various organizations also evaluated contributions of activities to results, examined the process of implementation, looked into unexpected outcomes, drew lessons from the experiences, identified noteworthy accomplishments or program potential, and made suggestions for development.
- It is clear from the results that project monitoring and evaluation helps organizations to recognize and address problems that could have an influence on projects' scope, quality, schedule, or budget. These findings can then be used to improve procedures for upcoming projects. It can be concluded that; based on the respondents' responses to the statements made that the various organization showed that sufficient monitoring and evaluating was performed in all the projects assessed.

Recommendation: The researcher recommends that regardless of whether a project is being carried out and supported by money or a partnership, the municipality must continue to use project monitoring and evaluation to show progress to internal management and external stakeholders. Measurable outcomes can be utilized internally by the project team, to support ongoing funding and explain to management and shareholders the return on investment of community development activities. That is crucial for a municipality; being a public institution. The outcomes of project monitoring and evaluation can be used externally to demonstrate a commitment to and expertise in community development, so that the organization can keep its license to operate. This enables the municipality to make wise choices on which initiatives to undertake and where investments should be made.

It should be stressed that project might have unique requirements. In such cases project managers and developers should collaborate to design suitable monitoring and assessment tools. They should encourage project managers to use these tools effectively and regularly and the researcher recommends that they should receive additional training in monitoring and assessment methods.

PROJECT SCOPE MANAGEMENT

Table 6.3 below shows the information that was collected for project scope management.

Table 6.3: Project Scope Management.

PROJECT SCOPE MANAGEMENT.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Project scope is communicated regularly to avoid nasty scope creep.	0%	6%	14%	52%	22%
Scope creep is treated as a risk factor and is mitigated during execution.	0%	8%	20%	46%	26%
The client's expectations are translated to measurable deliverables.	0%	6%	12%	58%	24%
Good managers review and approve deliverables step by step.	0%	4%	6%	66%	24%
We have a well-informed project team that understands what is in the scope.	0%	10%	8%	64%	18%
Relevant stakeholders are consulted for approval after every milestone.	0%	2%	16%	54%	28%

Source: own construct

Conclusion:

- Communication is essential to good scope management, according to 74% of respondents. This prevents scope creep, an issue during project execution, by ensuring that everyone on the team is aware of the project's scope and agrees on how its objectives will be met. Regarding scope creep, 72% of the respondents concurred that the organization views it as a risk that is reduced during execution.
- Of the respondents 82% stated that as the project advances, the team leader obtains permissions and signoffs from the various stakeholders as part of scope management, to ensure that the final project meets everyone's needs.
- Based on the data, it can also be concluded that businesses, including SOEs make good use of project scope management during the planning process to help identify and record all project goals, deliverables, deadlines, and budgets.

Recommendation: Even though projects are commissioned by a client the researcher recommends that the project manager should speak with all interested stakeholders particularly the community before determining the scope of a project. This is critical within a municipality where project teams are given projects that impact communities.

When working on internal projects, it is recommended that the project leader should consult with all representatives from every relevant department within the organization to determine the project's end user's needs. This can apply to teams in the organization that are in charge of providing customer care or that may have to switch from one technology platform to another. The scope of a project will benefit from extensive engagement, and sometimes assistance from colleagues may be needed in the future.

PROJECT DELEGATION

Table 6.4 below shows the information that was collected regarding project scope management.

Table 6.4: Project delegation.

PROJECT DELEGATION	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Effective execution is a result of selecting appropriately qualified project workers.	0%	6%	14%	58%	22%
Empowerment requires responsible participation by practitioners.	2%	4%	12%	60%	22%
Special skills training is provided regularly to project practitioners.	2%	10%	32%	46%	10%
Properly trained and skilled people are motivated workers.	2%	6%	14%	48%	30%
Delegation empowers workers to function independently.	2%	6%	12%	60%	20%
There are specific stakeholder engagement programs.	2%	10%	28%	46%	14%
An empowered employee means that there is less pressure on the manager.	4%	4%	10%	52%	30%

Source: own construct

Conclusion:

- The statements showed that organizations should remove obstacles that stand in the way of effective project team outcomes and should actively enhancing project team member's skills, such as negotiation and conflict-resolution abilities. This was seen in the respondents' response to the statement that empowerment allows for responsible participation by project practitioners (82% of the respondents were in agreement with this). Of the respondents 78% agreed that properly trained and skilled people are motivated workers, and only 8% disagreed. Majority agreement was found on all statements that sought to measure project delegation.
- The results showed that delegation is essential for project management simply because it is more effective and efficient for one individual or a project team to focus on one or two specialized tasks than it is for one person to try to juggle numbers of different duties. This is known as the law of division of labour.

- The results also showed that an emergent qualities perspective, good collaboration and teamwork occur naturally when delegation is done correctly. Of the respondents 82 percent also agreed that empowerment of employee's results in a reduction of pressure on the project manager; meaning that whoever manages least is the best manager. Organizations were shown to have a high degree of effective project delegation which is essential in successful project execution and also indicates good project management maturity.

Recommendation: Based on the data, the researcher also concludes that businesses need to make good use of project scope management during the planning process to help identify and record all project goals, deliverables, deadlines, and budgets. Project managers must serve as mentors who inspire and enable team members to contribute fully to projects. Being an ethical leader who inspires others to succeed calls for a variety of roles and qualities.

In order to boost team morale and motivate team members to complete the project's objectives, project directors must establish specialized team roles that have a substantial impact on productivity. If tasks are well defined, it makes the work easier. Project leaders are in charge of developing a structure of responsibilities for their teams because the success of a team depends on how accountable each member is.Project managers should encourage teamwork and assist team members to feel less cut off from their jobs. That way, team members are more committed and help to create a stronger, more effective team. It's crucial to resolve team disputes to prevent project failure. Whether such conflicts work in the team's favour or end the team depends on how project leaders handle such situations. Project teams should discuss approaches to accomplish shared goals by listening, thinking, and speaking to one another in order to avoid conflict.

Section C - Open Ended Questions

By allowing people to express any additional questions or concerns they may have, this segment was designed to purposefully raise the level of discourse among participants. No matter how carefully the planning was done, the researcher notes that some difficulties might have been missed when the questionnaire was created. Respondents should feel free to raise any topic that may come to their minds; as long as it's within the confines of the study. The identical format of a question or statement and an answer was used.

QUESTION 1: Provide four [4] things project managers can do to improve project success

Table 6.5: Respondent perception on things PMs can do to improve project success

NO.	PARCITIPANTS' RESPONSES
1	Good stakeholder communication.
2	Assign the correct tasks to the correct individuals.
3	Have risk mitigations plans in place.
4	As a Project Manager, please listen to the project team.
5	Improve the project planning phase.
6	Proper analysis by using the various systems in place in order to monitor the project success.
7	Review budget against anticipated expenditure and actual expenditure.
8	Become more solution focused in order to manage risks and unforeseen events within the project lifecycle.
9	Ensure legislative requirements are met.
10	Ensure that milestones are made clear and understood by the PM team members, on a month-to-month basis.
11	Constant review of risks, scope creep, budget and timelines.
12	Better stakeholder communication, Better project planning and strategizing, Clear role assignment for project members.

Source: own construction

QUESTION 2: Please provide four [4] ways to improve Project Execution?

Table 6.6: Respondent perception on ways to improve project execution

NO.	PARCITIPANTS' RESPONSES
1	Mitigate scope creep, monitor and measure deliverables and cash flow at all times.
2	Build a high performing team and monitor progress.
3	Stick to approved budget and ensure project quality.
4	Begin project with the End in Mind and Gain Buy-in from Your Core Team.
5	Monitor progress and performance through accountability.
6	Pre-planning of the engagement of resources and contractors and clarification on who has delegated authority if any.
7	Risk identification, communication and resolution.
8	Manage people, follow the processes, communicate information to all main stakeholders and team members, have a proper project plan in order.
9	Empower your team with the necessary skills and training prior to the project execution.
10	Stakeholder management, establish stakeholder engagement framework.
11	Check and identify bottlenecks, have a well-defined scope and/or specifications and a proper contract and have sufficient resources (budget, plant/equipment and workforce, professional/consultants and labour).
12	Effective scope management, continuous stakeholder engagement; Effective risk management; and agile methodology practices.

Source: own construction

QUESTION 3: In a descending order, what are the four [4] common causes of Project Failure?

Table 6.7: Respondent perception on four common causes of project failure

NO.	PARCITIPANTS' RESPONSES
1	No transparency, unclear objectives, poor planning and unrealistic expectations.
2	Starting late, insufficient scope clarification, not all stakeholders identified nor involved and inflexible budget allocation and adjustment.
3	Poor project planning, poor communication plan, poorly skilled project team and insufficient budget.
4	Setting unrealistic timelines, no informing stakeholders of project developments, project team that works in silos and scope creep.
5	Poor performance (project manager, consultants or contractors), bad design, poorly written scope of work and exhausting budget–- due to poor planning.
6	When a project loses momentum, due to it being put on hold due to budget constraints.
7	Community interference when they were not adequately engaged at the right time.
8	Governance requirements or other approvals that may not have been foreseen.
9	Poor planning, Insufficient resources (budget and labor), contract disputes and contractor defaulting.
10	Project not aligned to organization's mission & objectives.
11	Lack of project governance, lack of digital tools to fast-track delivery (where possible) and uncontrolled project scope throughout project life cycle.
12	Unrealistic time to finish project, no resource allocation, incompetent team and corruption.

Source: own construction

QUESTION 4: In descending order, what are the four [4] leader behaviour patterns that promote effective project execution?

Table 6.8: Respondent perception on four leader behaviour patterns to promote project execution

NO.	PARCITIPANTS' RESPONSES
1	A project manager must welcome mistakes in order for the team to learn. In project management you only learn by mistakes.
2	Problem solving, positive attitude, strong decision making and integrity.
3	Ownership, timeous decision making, progress meeting presence and decision support based on system / reported data.
4	Directive, participative, charismatic and supportive.
5	Inspiring team members, leading with example, motivating, and being goal- oriented.
6	Create a positive atmosphere between team members, delegate work appropriately among team members, good communication plan and good project planning.
7	Engaging with the employees and being clear about requirements. Do not add another mini project in the midst of the project you are currently busy with.
8	Trusting the team for different tasks, continuous engagement with team members, treating everyone equally and eliminating ambiguity when setting up goals.
9	Understanding the amount of work to be done vs the actual work completed (Progress of the Project).
10	Communication, servant leadership, decision making and problem-solving attitude.

11	Delegation of activities to grow team members, train team members for team building to address rework and clear performance agreement to be in place.
12	Know your project well, ask the right questions, identify risks and issues early, and mitigate/resolve them early too. Review methods, activities and processes to achieve milestones.

Source: own construction

Conclusion: When discussing what the project manager could to improve project success, some respondents stated that the project manager should spend more time listening to the inputs of the rest of the project team. Furthermore, the respondents emphasized that project managers must delegate correct tasks to the correct people. The importance of better stakeholder communication was also highlighted by the respondents as something that could assist in improving project success. The respondents also mentioned proper planning as one of the ways that could improve project success and they mentioned that measures should be put in place to mitigate risks such as maintaining constant review on budget, timelines and detecting scope creep**.**

With respect to the ways to improve project execution, respondents pointed to team empowerment and skilled project teams as one of the important aspects to improve project execution. Effective scope management, together with effective risk management was also mentioned as one of the ways to improve project execution. The identification of bottlenecks and the use of agile methodology practices were also raised as ways to improve project execution**.**

When respondents were asked to list common causes for project failures, a common theme of poor project planning was highlighted as one of the main causes of project failure. The respondents also highlighted a lack of resources, unrealistic timelines and incompetent teams as factors that contributed to project failure. Projects that do not align with organizations' strategic objectives was also touted as a major factor that contributed to project failure.

Lastly, regarding leader behaviour patterns that promote effective project execution, respondents emphasised the following: Problem solving, a positive attitude, strong decision making skills and integrity as the behavioural patterns that a leader should have that promote effective project execution. The ability to effectively delegate was also raised by the respondents, together with trusting in the abilities of the project team once the work has been delegated to them. Lastly, communication as well as servant leadership were also mentioned as another behavioural patterns that promote effective project execution.

Recommendation: For those factors that have a detrimental effect on performance it is recommended that special training programs be implemented. Regular training is a motivator for

managers and their staff members. Therefore, businesses would do well to maintain a program that is relevant to the tasks performed by the practitioners. Nothing that can boost productivity and give subordinates more authority should be left undone. Employees who feel empowered at work are more motivated and effective. Furthermore, the researcher recommends that beginning a project with a strong commitment to project planning is essential and will help to reduce scope modifications later on. Realistic goals can be set if organizations commit to good planning. Implementing PM software as a tool rather than a replacement for efficient planning and communication is another key aspect of the planning phase. It is advised that the project team discuss and take into account the lessons learnt from past projects during the planning or start-up phases of projects.

6.4 Conclusion

The objective of the study was to determine the link between organizations' PM Maturity and project success as it relates to successful project execution. It can be concluded that the study has revealed that clearly, there is a relationship between organizations' project management maturity level and project success. The study has determined that organizations should have cost and schedule control systems in place that have been established to monitor performance, in order to assess project performance or success within the organizations during projects lifecycles. The study also recommended that organizations should have measures in place whereby essential information is shared with project sponsors, as well as both internal and external stakeholders. Apart from monitoring performance, organizations need to be aware that cost and schedule performance are interdependent. Organizations need to have has an established recruitment strategy which guarantees that the correct individuals are recruited, not only for project managers but also for the project team members; as their selection plays a vital role in the implementation of project management processes. Having such policies in place is a positive indicator that the organization will have a high project maturity level.

The results of the data analysis make it abundantly evident that raising an organization's PM Maturity level enhances organizational project performance; which, in turn leads to successful project execution. It is important to take note of factors that contribute to achieving project success within municipalities. The findings of this study support then findings of other studies done on the topic such as Besner & Hobbs (2013:20) who also confirmed the correlation between project management maturity and project success.

6.5 Recommendations for Future Studies

The research was limited by the fact that it only examined one municipality in the Western Cape. In addition to the sample being somewhat small, not all municipalities or industries were covered. The findings can be compared to the findings of other similarly performed surveys after taking these limitations into account. Understanding the disparities between the polls and the causes of those variations should be the main goal. As a result, each PM maturity level's primary determinants of project success will be better understood.

6.6 Chapter Summary

The goal of the study was to comprehend the relationship between project success and PM Maturity. The study can be expanded upon in future research with a focus on good scheduling techniques to support the investment in PM. The study's findings lend credence to the idea that careful planning is worthwhile in terms of both time and money spent, since it contributes to project success. The study's findings should be used by PM professionals to create an accurate benchmarking model for scheduling methods that can be applied inside organizations. The model can be improved by including cost performance. This will allow organizations to benchmark scheduling and costing procedures, in addition to measuring PM Maturity.

In addition to reviewing how successfully the original research topic was solved, this chapter's recommendations for better using PM Maturity models and procedures were also covered. A few areas for potential future research have also been suggested.

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APPENDIX A: QUESTIONNAIRE

QUESTIONNAIRE

TITLE: Project management maturity and successful project execution within a municipality in the Western Cape Province.
Dear Respondent; This is an academic exercise, so this is not compulsory and you do it at your free will. Do not put your name or any markings that will identify you, you are free to withdraw from the research at any time without giving a reason. Your identity is strictly confidential and no information will be given to any authorities for any reason. Thank you for responding to this information gathering.

SECTION A= BIOGRAPHY

Please mark with an X or (√) in the box with the appropriate response. Mark one box only.

1. How old are you this year, choose the correct age range below.

18-25 years	**26-30 years**	**31-35 years**	**36-40 years**	**41+years**

2. What is your highest educational qualification?

No matric	**Matric**	**Diploma**	**Degree**	**Masters/PhD**

3. If other, please specify ……

4. How long have you been working, including your previous occupation, please indicate below?

0-5 years	6-10 years	11-15 years	16+ years

5. What is your gender?

Male	**Female**

6. What formal training do you have in project management?

None	Certificate	Diploma	Degree and above

7. Have you done training in Project Management given by the organization?

Never did	**Once only**	**From time to time**	**Regularly**

8. Please state your current position

Project Manager	**Project Administrator**	**Project Team Memeber**	**IT Technician**

9. List here at least two [2] negative experiences with your project execution processes in the organisation

- **……**

- **……**

10. List here at least two [2] positive experiences with project execution in your organisation that come to mind

- **……**
- **……**

SECTION B = LIKERT SCALE

In the Likert scale below, perceptions, opinions and attitudes are measurement / ranked on a scale of 1-5. 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree and 5 = strongly agree. Please rank the statements accordingly.

	PROJECT MANAGEMENT MATURITY	Strongly disagree	Disagreed	Neutral	Agree	Strongly agree
1	Project execution is always done and completed within planned time,	1	2	3	4	5
2	We always complete project execution processes within the budget	1	2	3	4	5
3	The quality specifications are always achieved without any reworks	1	2	3	4	5
4	The team works together to develop ideal project competences.	1	2	3	4	5
5	We have a clear strategy for selection and control of project portfolios	1	2	3	4	5
6	There is an ability to plan, execute and effectively complete processes	1	2	3	4	5
7	The admin system is well positioned to efficiently execute programs	1	2	3	4	5
8	There are remarkable competences in initiating and executing projects	1	2	3	4	5
9	The firm understands the complexities of defining good project goals.	1	2	3	4	5
10	My organization provides good IT support access for all projects	1	2	3	4	5
11	Appropriately qualified personnel are always assigned to do the tasks	1	2	3	4	5

12	Resource allocation is a critical element of effective execution success	1	2	3	4	5
13	Risk assessment is a critical element of the project execution process	1	2	3	4	5
14	We use modern tools and techniques to prioritize good projects	1	2	3	4	5
15	The project office tracts individually all ongoing projects at all the times	1	2	3	4	5
16	Prompt decision making and feedback is encouraged to avoid delays	1	2	3	4	5
17	Constant workshops are conducted to help project portfolio selection	1	2	3	4	5
18	The communication plan is displayed for all practitioners to understand	1	2	3	4	5
19	The vision and mission of the project is emphasised at all gatherings	1	2	3	4	5
20	There is a clear well-known external stakeholder problem communication plan	1	2	3	4	5
21	Stakeholder interests and expectations are well catalogued by leaders	1	2	3	4	5
	PROJECT MONITORING AND EVALUATING					
22	Variances are analyzed to identify causes for deviations from plans	1	2	3	4	5
23	Budget review allows for examining accuracy of the budget	1	2	3	4	5
24	Causes for negative variances include unrealistic budget	1	2	3	4	5
25	Knowing what happened allows for measures / corrections	1	2	3	4	5
26	The Gantt chart measures correctness of planning of tasks	1	2	3	4	5
27	Monitoring is conducted throughout the life project life cycle	1	2	3	4	5
28	Comparing actual vs. budget allows for corrective planning	1	2	3	4	5
	PROJECT SCOPE MANAGEMENT					
34	Project scope is communicated regularly to avoid nasty scope creep	1	2	3	4	5
35	Scope creep is treated as a risk factor and is mitigated during execution	1	2	3	4	5
36	The client's expectations are translated to measurable deliverables	1	2	3	4	5
37	Good managers review and approve deliverables step by step	1	2	3	4	5
38	A well-informed project team understands what is in the scope	1	2	3	4	5
39	Relevant stakeholders are consulted for approval after every milestone	1	2	3	4	5
	PROJECT DELEGATION	1	2	3	4	5
40	Effective execution is a result of selection of appropriately qualified project workers	1	2	3	4	5

41	Empowerment allows for responsible participation by the practitioners	1	2	3	4	5
42	Special skills training is provided regularly to the project practitioners	1	2	3	4	5
43	Specific tasks are assigned to appropriately skilled artisans	1	2	3	4	5
44	Properly trained and skilled people are motivated workers	1	2	3	4	5
45	Delegation empowers workers to function independently	1	2	3	4	5
46	There are specific stakeholder engagement programs	1	2	3	4	5
47	An empowered employee is a reduction of pressure on the manager	1	2	3	4	5

SECTION C: OPEN ENDED QUESTIONS

1. Provide four [4] things Project Managers can do to improve Project success.

- ……
- ……
- ……
- ……
- ……

2. Please provide four [4] ways to improve Project Execution.

- ……....
- ……
- ……
- ……
- ……

3. In a descending order, what are the four [4] common causes of Project Failure.

- ……...
- ……...
- ……...
- ……
- ……

4. In a descending order, what are the four [4] leader behaviour patterns that promote effective project execution?

- ……...
- ……...
- ……...
- ……
- ……

Thank You!

APPENDIX B: ETHICAL CLEARANCE CERTIFICATE

Cape Peninsula University of Technology

P.O. Box 1906 | Bellville 7535
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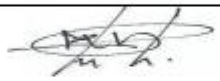
Email: fbmsethics@cput.ac.za

Office of the Chairperson Research Ethics Committee	**FACULTY: BUSINESS AND MANAGEMENT SCIENCES**

The Faculty's Research Ethics Committee (FREC) on **3 May 2022**, ethics **APPROVAL** was granted to **Onke Bilikwa (210159847)** for a research activity at the Cape Peninsula University of Technology for **M Tech: Business Administration (Project Management)**.

Title of project:	**Project management maturity on successful project execution in a municipality in the Western Cape Province** Researcher (s): Dr L Jowah

Decision: APPROVED

 **Signed: Chairperson: Research Ethics Committee**	**20 May 2022** **Date**

The proposed research may now commence with the provisions that:

1. The researcher(s) will ensure that the research project adheres to the values and principles expressed in the CPUT Policy on Research Ethics.
2. Any adverse circumstance arising in the undertaking of the research project that is relevant to the ethicality of the study requires that the researcher stops the study and immediately informs the chairperson of the relevant Faculty Ethics Committee.
3. The researcher(s) will conduct the study according to the methods and procedures set out in the approved application.
4. Any changes that can affect the study-related risks for the research participants, particularly in terms of assurances made with regards to the protection of participants' privacy and the confidentiality of the data, should be reported to the Committee in writing accompanied by a progress report.
5. The researcher will ensure that the research project adheres to any applicable national legislation, professional codes of conduct, institutional guidelines, and scientific standards relevant to the specific field of study. Adherence to the following South African legislation is important, notably compliance with the Bill of Rights as provided for in the Constitution of the Republic of South Africa, 1996 (the Constitution) and where applicable: Protection of Personal Information Act, no 4 of 2013; Children's act no 38 of 2005 and the National Health Act, no 61 of 2003 and/or other legislations that is relevant.
6. Only de-identified research data may be used for secondary research purposes in future on condition that the research objectives are similar to those of the original research. Secondary use of identifiable human research data requires additional ethics clearance.
7. No field work activities may continue after two (2) years for Masters and Doctorate research project from the date of issue of the Ethics Certificate. Submission of a completed research ethics progress report (REC 6) will constitute an application for renewal of Ethics Research Committee approval.

Clearance Certificate No | 2022_FBMSREC 023

APPENDIX C: GRAMMARIAN CERTIFICATE

PROOFREADING AND EDITING CERTIFICATE

Hugo Chandler

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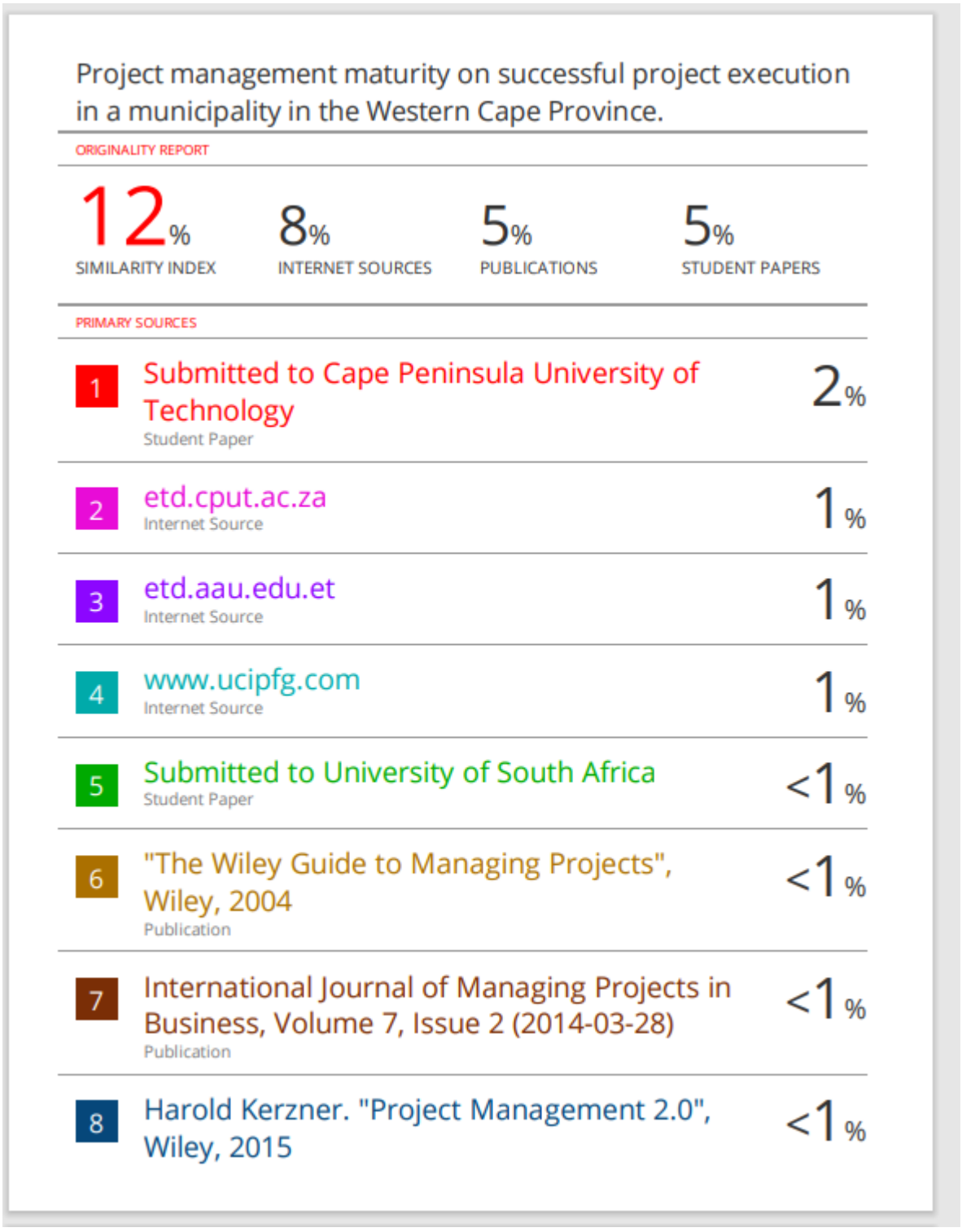

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