

**THE IMPACT OF PROJECT MANAGER'S COMPETENCIES ON  
PROJECT TEAM PERFORMANCE**

**By  
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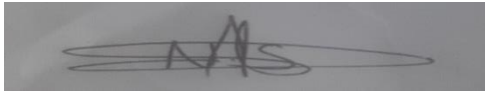
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## DECLARATION

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

A rectangular box containing a handwritten signature in dark ink. The signature appears to be 'SITYODANA NOZUKO' written in a stylized, cursive manner.

Signed

03 August 2021  
Date

## ABSTRACT

Management by projects is in the increase as organisation after organisation has joined the “*projectification*” trend because it is considered effective. This management system is arguably as old as Nimrod the Great hunter before the Lord when he built the first 9 cities ever built on earth. Touted today as a new discipline, but the reality is it has been here and used over the millennia, and like any leadership it is constantly questioned. As the global world gets *projectified*, there is a need to understand why so many project execution processes fail. The debate is focused on human behaviour since technology has made the operational systems more efficient than ever in the history of humanity. This research focused on the competencies of the project leaders in different sites for one large organisation. Cognisance was taken of the differences of the tasks, the personalities of the leaders and the expectations of the practitioners who are impacted on by the resultant leadership style. The competencies of these different leaders and the general practice as perceived by the subordinates was investigated. A taxonomy of sorts of the competencies expected of effective leadership was compiled as part of the study of what would be ideal generic competencies.

The population under study was project practitioners in IT based operations. A handful of practices were identified which would ideally comprise of the competencies for effective project team leaders who want performing teams.

A questionnaire was distributed to project managers and team members in different depots for the reasons of collecting data for this research. Random sampling was used to remove and bias and subjectivity in the participants’ selection process. This was repeated at every site where these IT projects were taking place, and this allowed for objective data collection methods which gave both validity and reliability of the information gathered. The Responses was captured on Excel Spread Sheet (ESS) and analysed using diagrams and graphs. analysed using a two-sample t-test. A research instrument (questionnaire) was created for the reasons of collecting data for this research. The mixed research procedure that was utilized educated on the idea of the questionnaire to be used, consequently the questionnaire was. There is a theoretical evidence that project manages play a huge role towards the performance of the team members. Even the results from the questionnaire showed that. The research finding should be of assistance to many project coordinators at their different levels and with the different types of tasks and competencies to apply to positively impact project team and eliminate project failures.

**KEY WORDS;** project, management by project, competency, operational efficiency, team motivation and team performance

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## **DEDICATIONS**

I dedicate this work to my Aunt, Fikiswa Ndita, thank you very much for being a pillar of my strength, believing in me and supporting all my endeavours. To my daughter (Kuminathi), you inspire me to keep pushing because I know you are looking up to me. Odwa Mnyapa, you paved the way, thank you for teaching me in your silence, hardwork and determination, your encouragement means a lot to me.

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## **APPENDICIES**

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## **GLOSSARY**

### **ABBREVIATION**

PMBOK  
PERT  
EQ  
SOE  
IT  
CPA charts  
ESS  
CPM  
RTM  
PIR  
PLL  
PESTEL  
  
PM  
SOR

### **FULL WORD**

Project Management Book of Knowledge  
Program Evaluation and Review Technique  
Emotional Intelligence  
State Owned Enterprise  
Information Technology  
Critical Path Analysis  
Excel Spread Sheet  
Critical Path Method  
Traceability Matrix  
Project Information  
Project Lesson Learnt  
Political, Economic, Sociological,  
Technological, Legal and Environment  
  
Performance Management  
Statement of Requirement





## **CHAPTER 1:**

### **1.1 INTRODUCTION**

The practice of competencies has become widely applied in many projects, suggesting that project competencies applications are vital to a project. Turner, Ledwith and Kelly (2009:284) asserted that IT projects require competencies to manage innovation in such a way that growth and satisfaction of strategic objectives can be achieved. However, while the concept competencies is recognised and its principles practiced to a degree by some IT companies, it seems that the vast majority of firms are not well-informed pertaining to competencies and therefore, might not even be adhering to helpful competencies.

IT companies apply competencies to innovate and grow their businesses (Foss & Saebi, 2017:221). Turner, (2012:942) argued that although IT companies play a significant role in the economy, most projects within IT departments are managed by amateurs. Projects within IT fail frequently, owing to the fact that people managing these projects often lack competencies (Turner, 2012:942). Turner and Kelly (2009:282) were of the opinion that the smaller the company, the less likely it is to use competencies. the problem statement of this study revolves around the competencies of the project managers and the impact competent leadership may have in the reduction of project failure. That said, the aim of this study was to determine competencies that enhance project team.

To attain this, questionnaires were administered to SOE in the Johannesburg. In analysing the generated data, the statistical ESS (Excel Spread Sheet) was utilised, so descriptive analysis underpinned the analysis of this study. This chapter will present the rationale for this research, comprised of the background to the problem, the problem statement, research objective and questions. Additionally, the significance of this research and ethical considerations are expressed.

## 1.2 BACKGROUND TO THE STUDY

Structured purely along the “botho” value system (Jawah, 2015: 264-273), working in teams has become the norm in current tradition as organisation after organisation moves to use management by projects. The idea of management by projects is expected to maximise the use of resources that are generally scarce and thereby bring about efficient and effective use of organisational resources. This has therefore turned to use the teams as a new form of operation, very much like the traditional communalism and collectivism approach to the performance of tasks in the African leadership system. The study was therefore focused on observations of “best practice” of the project managers and supervisors as perceived by the subordinate-project-practitioners. The behaviour, conduct and personality traits of the managers and supervisors were under scrutiny. Although there appears to be a tremendous growth in the use of the “new discipline,” with all its advantages, there is a high failure rate in this field. To avert the high failure rate and yet take advantage of the trending management-by-projects, researchers (academics) have turned on to study and understand better this subject. Studies have been conducted on how to put together the best team (Darling-Hammond, 2019; 79-140) as a panacea to the high project failure rate. Little focus is put on the subordinates whose performance produces the desired result, and their on-the-job assessment of the project manager (leader). The effectiveness of a team largely depends on the effectiveness of the followers or subordinate project practitioners. The success of a project execution process depends largely on the ability of the leadership to meet expectations of the tasks, subordinates, and environment. This study was focused on the competencies needed to make a team effective as perceived by the subordinates. The project execution processes involve the subordinates at the lower levels of the project system, and it is these that convert the management “dream” into deliverables.

A competency is defined as a set or collection of characteristics and skills that an individual use to effectively perform tasks and achieve objectives efficiently. It may be considered as described as a combination of intellect, emotional intelligence and social intelligence (Maaleki, 2018:18). Suggesting that competencies are inherent in the behaviour and personality of the individual and is seen in their ability to perform a task or relationships that enable the abilities to perform. Jawah (2013:708-719) says

that leader competency is seen in the ability of a leader to adjust to the situation and the tasks to be performed. These are the postulates of the contingency theory which stipulates that there is no best-fit leadership theory or behaviour (Bartram, 2005:51-64), but rather that the ability of the leader to adjust to the situation and make people perform a competence on its own. This therefore dictates that the competency of any leader has to do with the ability to get loyalty and motivate the followership if there ever is to be success. A team is a group of people whose functions are complementary to each other and are working towards the same objective (Jain, 2009:96).

In a team, the team members assist each other to work towards the achievement of these known objectives, and they each has a role to play. Not every group is a team, but every team is a group, except that a team comes with a special task to be performed which is what brings them together in the first place. The general understanding has been that a technically qualified individual is a competent individual to execute a project according to the expectations of successful project execution. Increasingly the focus on hard skills (technical skills) and the measurement of competency on the basis of technical skills is diminishing (Missonier, 2017:09). The high failure rate of engineering projects, all of which are generally headed by qualified and experienced engineers, in the presence of state of the art technology, has tended to ask more questions than provide the answers to this unique phenomenon. There has been an increase in the acknowledgement of the importance of soft skills (human relations) as the panacea for the unprecedented failure of project execution processes. The project management discipline has numerous bodies and associations formed over the years that have sponsored (and continue) studies and continue to develop material on how to effectively executive projects.

PMBOK (2018), called in full, the Project Management Book of Knowledge is a result of many studies in project execution including problems and best practices around the subject. A generic list of critical knowledge management areas that should be in the project manager's kit of competencies was compiled and continuously goes under review. The PMBOK identifies 5 project processes and 10 knowledge management areas. These are listed in table 1.1 below.

Table 1.1: PMBOK 10 Project Management Areas



Source;[www.projectmanager.com](http://www.projectmanager.com)

As illustrated in table 1.1 the PMBOK acknowledges that there are 5 project processes through which the project goes or is executed (Morris 2013: 6:23). These processes are, namely; project initiation, project planning, project execution, monitoring and controlling, and project closing. Project management is a growing discipline as many organisations turn to management by projects across disciplines. It is no longer the preserve of engineering organisations, but by definition now includes many other forms of operations (Harrison and Lock, 2014:34). It is within these processes that certain competencies are expected (in the manager's competencies kit box) since these will enable the manager to successfully execute the planned undertaking. Each stage will inevitably demand separate skill sets meaning therefore that the project manager needs to be versatile and contingent in his actions and style of management. Considering that there is this increase in management by projects, it may be ideal for us to define and describe a project, this leads us to the question.

### 1.2.1 What is a project?

The word project is used loosely in reference to anything that an individual undertakes to do, too often referring to an activity or business operation. Whereas, there is a definite meaning for the word project and hence project management makes reference

to the management of a specific undertaking. It is therefore essential to clearly define and separate project management from other disciplines. To differentiate project management from other management systems, we need to have a comprehensive understanding of what a project is. Numerous definitions have been advanced, and some of the definitions used within the scope of this study are listed and discussed in table 1.2 below.

**Table 1.2: Definitions of project**

<i>English. Oxford Dictionaries. 2016</i>	<i>Planned set of interrelated tasks to be executed over a fixed period and within certain cost and other limitations.</i>
<i>Manning (2008:35)</i>	These are temporary undertakings characterized by certain structural properties like, particular task specifications, time constraints and team relations that guide the activities.
<i>Mesly, (2016:53).</i>	A concrete and organized series of activities limited by time, costs and quality which leads to the realization of a unique and innovative deliverable product, service or process
Wideman (2004:30),	A temporary endeavor which is not repeatable and is undertaken to create a unique product, service or result.
Turner and Müller; 2003:1-8	A management environment that is created for the purpose of delivering one or more business products according to a specified business case.
Burke and Barron, 2007:39	A temporary endeavour undertaken to create a unique product or service (outcome or result).
Project Management Institute. PMBOK (YEAR)	A “temporary endeavour (cannot go on indefinitely) with a known beginning and a known end, endeavour of which must be used to create a unique product, service or result”.

**Source: own construction**

Different definitions are used in the process of defining what a project is, but there are common characteristics for a project. Thus the definitions in a broad sense are different words used to describe the same object, and hence the need to show as many definitions as possible. There seven distinguishable characteristics of a project (Kathleen,2017: 169-179) and these are, namely; has specific objectives, fixed time schedule, complexity of activities, size and nature of the tasks to be performed, statement of requirements (SOR), organisation and structural constraints and the

structure of communication system (information system). These characteristics determine the tools and techniques that are needed for effective project execution (Crawford, Kent, and Pennypacker, 2002:73-78).

- **Objective:** each one of these temporary undertakings is based on the desire to satisfy or meet certain objectives (Pillai and Nair, 2015: 485-497). In the project charter these are clearly identified and defined, the effort put in making the project execution process to be successful is because it is intended to meet these objectives.
- **Schedule:** project implementation or execution is bound by time with a clear and known start date and end date (Javier and Stinn, 2018: 40-50) at which point the complete product must be delivered. There is a relationship also between the time taken and the fixed costs or overheads like salaries, etc. Failure to meet time schedules will result in cost overruns and possible legal implications, and project failure (Pillai and Nair, 2015: 485-497).
- **Complexity:** larger projects will have more activities or cost centres which need to be coordinated from the one project manager and yet headed (each activity) by sub-team leaders (Giorgio and Mancini, 2015: 285-301).
- Fisher and Keil (2016), posits that normally the projects are classifiable into Work Breakdown Structures (WBS) and all these centres will be working towards the completion of one product – the deliverable project. The larger, the more complex and the more differentiated expertise (Persky and Robinson, 2017: 72-80), and the higher the possibility of conflict and failure.
- **Size and Nature of Task:** there is a relationship between the size and complexity and the type of resources needed (human, equipment and or materials) all of which impact on the budget and sometimes the quality (Sajilan and Tehseen, 2015: 20-34). The size and the nature of the tasks also informs the tools to be used and specific competencies contingent to the environment. A misfit of these may inevitably lead to project failure due to cost overruns and too often compromised quality standards.
- **Resources:** these may be found listed under Statement Of Requirements (SOR) in most project documents. Gasik (2011) opines that project resources may be defined here as any input needed for the execution of the project be they tangible or intangible, material or human, finance or intellectual capacity needed for the

execution. The one critical element in this aspect of project management is the ability to plan properly on the quantities, the qualities and the timing on the availability of the resources (Nogeste & Walker, 2011: 1368-3047) at the time when they are needed – JITs (just in time supplies).

- **Organizational Structure:** the structure of the organisation and where in the organisation the project is located has its own constraints that may cause unnecessary problems during project implementation phase. Tall structures tend to allow for bureaucratic management systems (Mazibuko, Tait and Jowah, 2015:313-335) which delay response times for required feedback. Matrix structures also cause serious authority gap systems in the execution of projects (Alam, Gale, Brown and Khan (2010:495 - 516).
- **Information and Control Systems:** information is critical in the execution of projects (David, Jake and Garcia, 2016: 2170–2183), specifically because the project comprises of different activity centres work simultaneously on the same project but with different tasks. The communication infrastructure should be structured in a way that information passes through to the desired recipient in time and in the correct format for the recipient (Nicholas & Steyn 2012:503).

If these can be appropriately and timely combined and utilized, that will enable effective project integration of all the aspects of the project (Burke 2010: 265). This meets the expected competency as required by one of the 10 PMBOK's project management knowledge areas – Project Integration management. This ability to coordinate (competency) the different aspects together with the resources (human, financial, material, equipment, etc) is necessary for effective project execution. Each task needs an appropriate mix of the resources, this together with the tools and techniques ideal for the effective execution of the tasks (Heracleous and Klaering (2014) : 131-161). It is generally accepted that if appropriate project management technologies are applied, they help reduce the levels of disruption of the routine business activities in many cases. Yang, Huang and Wu (2011) suggests that the skills required are largely depended on the specifics of the project to be executed and the resource needs for the respective tasks.

### 1.2.2 Project Management

The nature of a project as defined above immediately shows some unusual expectations or competency requirements. Project management is not like any other



management, but has its own complexities which need to be understood in the context of the nature of projects. This can only be understood if project management is defined, the different definitions used or applied to this discipline are indicated in table 1.3 below.

**Table 1.3 Definitions of Project Management**

<b>SOURCE</b>	<b>DEFINITION OF PROJECT MANAGEMENT</b>
Chatfield (2007:9)	Is the discipline involving the initiating, planning, preparation, organising, and controlling use of materials necessary for the completion of an identified project (recall that a project is controlled by the iron triangle).
Nokes, (2007:25)	Is the discipline which includes the initiating, planning, executing, monitoring, controlling, and finalizing of the different processes in undertaking to achieve objectives of a project.
Dinsmore, (2005:35)	Overseeing the processes and activities from the beginning to the end of the performance of all the activities necessary which will result in the completion of an unrepeatable product – the project and successfully meeting the objectives.
Jowah, 2015:328	The function of galvanizing and motivating a team and direct them towards working for the achievement of a multi-tasked undertaking that should be combined into one product within the limitations of time, budget, quality, scope and authority gaps
PMBOK (2013:65)	Is the application of knowledge, skills, tools, and techniques to project activities to meet the project requirements.

**Source: author's construction from literature**

The temporary nature of the project stands in sharp contrast to the other management processes or operations (Cattani, 2011:4) which are repetitive. The nature of operations management is that, it involves continued or a continuous process of creating or manufacturing products and or services. The temporary nature of the project execution processes therefore demands a different approach, suggesting a different competency set from the traditional (Morris, 2012: 634-642). The inclusion of a team in the definition indicates that people of different expertise come together to create this one unique and unrepeatable undertaking. Thus there is a clear difference between the two, suggesting therefore that there needs to be a better understanding

of how projects should be managed effectively. The differences between project management and operations management is illustrated in table 1.4.

Though there is a vast difference between operations and project management, there are similarities since both involve people and completion of tasks. There are considerable overlaps (Aubry, Müller and Glückler, 2011: 42-56.), when an organisation seeks to change, say an operation method, the process of changing is actually a project. Operations takes over after the project is completed, and they focus on maintaining and supporting the processes of making the products. When a project is completed, the operations manager takes over at the project closeout stage and they may collaborate for a while (Jerbrant, 2013: 152-172).

### **1.2.3 What is operations management?**

Tianyang and Shuhan, (2019: 5320 - 5333). defines operations management as the management or overseeing over the ongoing activities and permanent processes that follow organisational procedures to produce the same product (or service) on a routine basis. These repetitive activities produce the same product, and use the same inputs and outputs continuously as a cycle. Operations are characterised by specific features, namely;

- a) Continuous production cycles to produce the same product and or service
- b) Varied (numerous) objectives to be achieve to maintain and sustain the business
- c) The systems to be used are already created and they are merely used and maintained
- d) The processes and activities support the status quo by keeping established standards

Operations are essentially a maintenance and sustenance of the existing system and standard using set rules and operating procedures. Operations management is the traditional method of running business operations, largely routine with little variation and thus less risks (Dai and Wells, 2011: 523-532). The new focus may ordinarily be on trying to implement more efficient methods of manufacturing the same products with possible high volume output, less material costs and any other such improvements that may impact on profitability. No new products or services are produced during operations management, but the process helps in maintaining the existing system. Consequently, operations are used to run regular business models to

achieve more efficiently the business goals by supporting the production on a daily basis (Dai and Wells, 2011: 523-532).

### **1.2.4 Similarities between project and operations management**

There are overlaps in the management systems of these different entities, as such they to some extent in certain situations complement each other. But from the definitions is fairly easy to tell the differences, the similarities are few, namely;

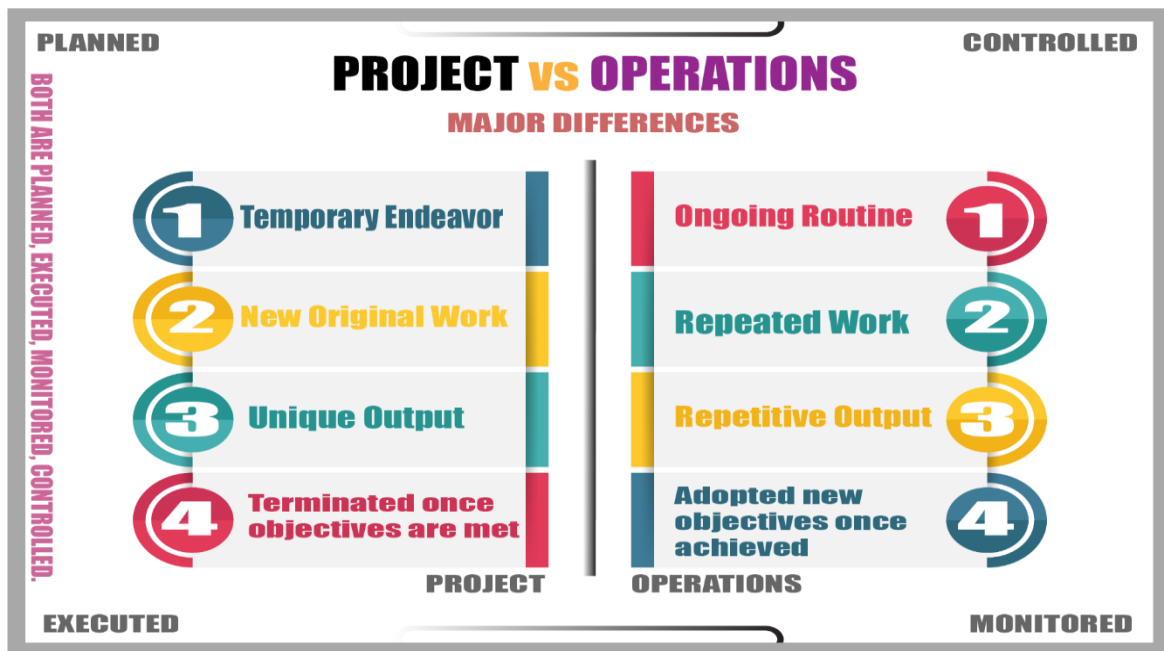
- Both involve the management of people – people skills are needed
- Both involve planning for the processes including putting resources
- The execution process requires continued monitoring for efficient results
- The final output should be as required or usable by the customers

Cristóbal (2016: 47-62) suggests that the overlaps between these two systems are when there is need for significant change of business operations. Any such changes will then be handled as projects, and as soon as that is done the operations take over. What is more glaring is the differences between the two system and or processes, primarily because of the temporal nature of the project. The differences are discussed below.

### **1.2.5 The differences between project and operations**

The one critical element is the temporary nature of the project because of the exclusive use of teams to perform the functions or execute the tasks. Teams are comprised of people with different skills, and as such different expectations and ethics as it relates to the methods used to operate (Diaz, 2017: 23). In operations, though different skills are required, they are generally more in the form “production lines” with part operations joining together to form the final. The differences between project and operations are illustrated in table 1. 4 below.

Table 1.4 Differences between Project and Operations Management



Fraguela, 2016: 163–168

As stated above the major differences between these systems may be stated as structural, the project is temporary in nature, it is new work to be done, it is a unique product and is not repeatable and stops as soon as the objectives are met. On the contrary, operations is ongoing routine work and tasks, producing the same product with specified standards and the output is repetitive output (Iglesias, 2017: 497–508). The temporary nature of the project and the exclusive use of teams to effectively execute the project successfully brings us to another stage. The standards used to measure the successful execution of a project are not the same as those used for operations.

### 1.2.6 Project management success

Yang, Huang and Wu (2011: 258-267) asserts that there is a tendency to confuse project management success and project success, project management success is when the project execution process is completed within the triple constraints. Project success is when the completed project is able to satisfy the need, meeting the objectives or purpose for which it was made to be determined by the end user (Skulmonski and Hartman, 2009: 61-81). Project execution is critical because it is during this phase that projects are never completed (fail) within the iron triangle as

stipulated from the initiation stage. There are many reasons why a project execution may fail (Anantatmula, 2010:13-22), and these are generally not listed in the causes of failure. The project execution process is considered as successful if the project itself is completed within the specs, the time and the budget (Eid, 2011: 337–342). Any failures on meeting these three (the iron triangle or the triple constraints) result in the failure of the project management process. These constraints can be used to measure the effectiveness of the project manager and the project teams that are involved, this is the focus of the study. Gareis, Huemann, and Martinuzzi (2011: 33) states that there are competencies required of a project manager to be able to influence the team to successfully execute a project undertaking.

### 1.2.7 Project leader competencies

The project manager has to work with the team to complete the project within the stipulated time, budget, quality and scope. While there is so much technology around that should make project execution easy and more efficient, and although these projects are managed by qualified and experienced engineers or technicians, the failure rate remain high (Heracleous & Klaering, 2014: 131-161). The most critical success factor therefore is the appointment of a competent project manager who should be able to coordinate the project team to successful execution. The competencies required must therefore be known by both the project manager and the senior management that does the appointment. The definitions of competencies are listed in table 1.5 below.

**Table 1.5 Definition of competencies**

<b>Author</b>	<b>Definition</b>
Crawford, 2005:9	“The ability to mobilise, integrate and transfer knowledge, skills and resources to reach or surpass performance in work assignments adding economic and social value to the organisation”.
(Takey and Carvalho, 2015: 785)	The immeasurable personal attributes can be inferred from their personal power as seen through their qualifications, the experience (lessons learnt approach), attitudes towards both tasks and other practitioners (team members) and the behavior of the leader.

(Jawah and Laphi, 2015: 20).	Competency can therefore be defined as the ability of an individual to equitably balance the use of the skills and the resources to successfully implement a set task to meet the objectives
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**Source: own construction from literature**

The expected competencies of a project leader (any leader or manager for that matter) go beyond their qualifications (technical in the case of IT projects under study) and experience. Project tasks are planned, executed and monitored by human beings, suggesting therefore that the competency tool kit must necessarily include human relations. Barry and Uys (2011:29-44) identified critical success factors required as part of the competencies of a project leader as, namely; teamwork, project planning, cost management, scope management and leadership.

The selection of a project should therefore consider these properties as critical if the leader is expected to successfully navigate the unpredictable terrain of project execution (du Randt, van Waveren and Chan, 2014:13). Stakeholder management is a critical aspect, and this includes both internal and external stakeholders suggesting the importance of human relations as a need for effective execution. It may be to the advantage of effective execution if the project leader is involved from the beginning, initiation through planning to enable the leader to have a full grasp and appreciation of all that is involved in the project.

**1.2.8 Project Managers’ Competencies and Project Team Performance**

Clarke (2011:10) define competencies as emotional intelligence (EQ) transformed into useful capacities, these are generally characteristics developed through experience or some form of training. Mishar and Bangun, (2014: 394 - 406) posits that EQ is characterised by the ability of an individual high on EQ to have; self-awareness, others awareness and environmental awareness. Muller (2016:23) observed a direct connection between the ability of a leader to understand personal feelings and considering other people’s feeling when making decisions. Whereas other studies focussed on the EQ and its importance, other research findings complementing the previous research reports (Rezvani, 2011:115) have identified that project managers need certain specific competency sets, namely; the general project manager’s conduct, ability to have good judgement and make good decisions, ability to exchange

information (communication skills), ability to supervise a group, technical skills and seriousness of purpose.

Clarke (2011:17) in separate research undertaking noted that there was a great need for the project manager to have a good combination of the technical skills, compassion and passion as this would reduce the differences between the team and management. The extended existence of individual differences among project practitioners has an impact on project team performance. Kock (2016:152) echoes the same sentiments, postulating that the project manager’s abilities are an indispensable competency for effectively leading a project team. The ability of the project leader to integrate project operations is also noted as one of the 10 key project knowledge management areas or competencies. Pinto, (2012:67) found competencies that are of great significance through critical project changes and vital for project management capacities. Alexander, Penley and Jernigan and Jernigan (2014:62) express that competencies fill in as a complement to projects, yet it isn't so helpful if utilised as a substitute to project.

### 1. 2.9. Project success factors

Numerous critical success factors have been proposed by many researchers, sometimes in agreement or not considered important by others. The table below is a list of the competencies listed from two different studies. These are illustrated in table 1.6 below.

**Table 1.6 Critical success factors for project execution**

<b>Gewanlal and Bekker (2015:33-47)</b>	<b>du Randt, et al (2014:13),</b>
Timely and appropriate communication skills	All round competent project manager
Contingent leadership style	Use of project methodologies/ techniques
Planning and scheduling time and resources	Technical background of the team
Decision-making and problem-solving skills	Timely resource supply and allocation
Effective supervision of the project team	Clear, realistic and measurable objectives

Ability to determine cost-, time trade-off	Project front-end loading
Emotional intelligence and good relations	Political stability and organizational support

**Source: own construction from referenced sources**

Clearly much is needed from a project leader or manager as one goes through the list in the table above. Take this up together with the 10 project knowledge management areas (PMBOK 2018), though some overlap, evidently much is needed and or expected from an effective project leader. The human element does not seem to have been emphasized much, or at least not directly, but all these elements involve working with people. The effectiveness of any leader is a direct function of their relationship with the followers (Jawah, 2013:9) and the congruency that leads to loyalty and high performance. The role played by the subordinates therefore is critical for the success of any project undertaking, yet it is they that can help measure the competencies that are found in their managers.



### **1.3 PROBLEM STATEMENT**

There is a steady increase in management by projects (projectification) in industries that are traditionally operations management driven. This has an impact on the demand for project management competencies and thereby the need for greater focus on projects and project management. Though management by projects has seen a steady increase in the industries, there appears to be a shortage of the relevant skills and competencies needed to effectively execute these projects. As alluded to in the literature review above, there is high projects failure rates amongst different industries with specific references to IT projects. Even where the hard skill requirements are met, there remains a high project failure rate, and this is cause for concern in a discipline expected to solve the problem of efficiency in the industry. The study focused on the competencies required by project leaders and the impact competent leadership has as a panacea to the project execution failure rate. The project team is an indispensable part of project execution, hence the focus on the competency of the project leader in relation to team performance. The study sought to identify the competencies presumed critical for effective project team execution by the project practitioners themselves.

### **1.4 THE RESEARCH OBJECTIVES**

Research objective is what is expected to be accomplished in the research process put in clear terms and clearly defined. The general intentions of the research are thus stated as; primary and secondary objectives.

#### **1.4.1 Primary objective**

Identify the competencies considered to be necessary for effectively motivating project teams to successfully execute projects in IT.

#### **1.4.2 Secondary objectives**

Secondary objectives are merely an elaboration of the primary research objective, which is the expectation of the researcher from this research project. The secondary objectives in this study were outlined as indicated in bulleted format below:

- Identify the project leader competencies considered ideal by the project team members during IT project execution phases.
- Identify the common project leader behavioural patterns that may be considered retrogressive by the project practitioners.
- Identify what project practitioners consider to be motivating and allowing for the effective execution of these IT projects.

## **1.5 RESEARCH QUESTION**

A research question serves the purpose primarily of giving guidance to the literature to be reviewed and the study to be performed. In a sense the research question answers the problem statement and addresses the research objectives. In this survey, the main research question asked was;

### **1.5.1 Main Research Question**

What competencies are required for a project manager to enable a team to perform effectively?

To this, a set of sub-questions were asked to expand on the existing question with special reference to the competencies available in some literature. The sub questions are;

- What competencies are considered ideal during project execution phases?
- What competencies are generally expected of a project team manager?
- What competencies in the project decision making process are used by project team managers?
- What competencies are commonly used in the management of project teams?
- What role does communication play in the management of a project team?
- What is the role of hard and thinking skills play in effective team management?

## **1.6 RESEARCH DESIGN AND RESEARCH METHODOLOGY**

Research design is the road map or the steps to be followed during the research, demanding answers to “what” should be done (Jowah, 2017:78). The researcher opted for the descriptive research design because it is simple and allows for simultaneous

use of the two research methodologies which are questionnaire and observational research method. On the other hand research methodology is about “how” the “what” will be executed at the different stages of the research design (Welman, Krugger and Mitchell, 2005:9). The researcher used both qualitative and quantitative research methodologies (mixed research methodology) because they complement each other in the helping with understanding the phenomenon understudy. These can be used simultaneously in the same research, and in this case this assisted in cutting down on time with all the advantages. This approach enabled the researcher to have a full understanding of the phenomenon (breadth and depth) which helped in the identification of the competencies. Therefore, with the use of a research tool (questionnaire) data was collected. The decision to carry out the research using these methods took into consideration both the type of data required and the population from whom data was to be collected.

### **1.6.1 Target population**

Collis & Hussey (2009:62) stated that the target population refers to the entire group of individuals or objects that researchers are interested in. The population contains the fundamental elements that gives them a chance of being sampled to take part in the study (Churchill and Lacobucci, 2002:630). According to Sekaran (2003:265) a group of people, events or things that a researcher has some form of interest in researching is regarded a population of a study. In this research the target population was IT project practitioners working at this nationwide State Owned Enterprise with it’s headquarters in Gauteng. Each one of the respondents needed to be a subordinate reporting to a supervisor or manager in IT projects.

### **1.6.2 Sample frame**

Sample frame here is defined as the total number of people whose characteristics fit into the category of the people who qualify for the study (Welman, Krugger & Mitchell, 2005:9). The quantitative sample of the study consisted of 340 people in IT under the SOE in the Johannesburg area where the research took place.

### **1.6.3 Sampling method**

Sampling is a process used by researchers to identify, select and separate a certain number of individuals or objects from which a survey of a study will be conducted

(Jowah, 2011:83). Systematic random sampling was used for the purpose (Esfahani and Dougherty, 2014), the first respondent was picked randomly and thereafter every third (3rd) individual was picked for the research.

#### **1.6.4 Sample size**

In all 110 people were sampled for the research, which was just under one third of the sample frame. Yang, Huang and Wu (2011:258,267) posits that the bigger the sample the better, but advocates that one tenth of a representative sample will suffice (be adequate) for generalisations if the sample has all the characteristics required for the study. This sample was considered large enough.

#### **1.6.5 Data collection instrument**

A research instrument (questionnaire) was constructed for the purposes of data collection for this research. The mixed research methodology that was used informed on the nature of the questionnaire to be used, thus the questionnaire was designed to fit that. The instrument is divided into three parts, namely; biography, Likert scale and open ended section for discussions.

**SECTION A** – Biography of the respondents, this was to help in the screening of the respondents to confirm if they conformed to the characteristics required for the population to be studied.

**SECTION B** – Likert scale, used to rank opinions, perceptions, beliefs, judgments and attitudes of the respondents. The scale was created for the respondents to rank their “feelings” on a scale of 1-5. The rankings were 1 = strongly disagree, 2 = disagree, 3 = neutral or indifferent, 4 = agree and 5 = strongly agree.

**SECTION C** – Open ended questions (qualitative); this section requested the respondents to state their opinions, experiences and thoughts about aspects of the research. This allowed for interaction with occasional questions to confirm and or verify the assertions. The document in all covered all that was expected by the researcher with the idea of getting from the respondents whatever it is that they knew about the competencies of the leaders.

#### **1.6.6 Data collection method**

According to Dorsten and Hotchkiss (2005:30), data collection is a process of collecting information by humans or machines. A study should utilise a survey to

collect quantitative (questionnaires) data because this method is a relatively quick, cheap, efficient and accurate means of accessing information pertaining to a population. To facilitate the process, the research had 4 research assistants trained to help with face to face collection of the data. This method was selected for a few reasons, it would be the quickest method, it would increase the questionnaire return rates and the respondents were free to ask questions for clarity. All the questionnaires from the different sites were brought in within 6 days of the operation and were ready for the next stage of the research process.

### **1.6.7 Data analysis**

The collected data was brought together (questionnaires) and they were cleaned, edited, coded and captured onto the Excel Spread Sheet (ESS). This was the most readily available, and was equally ideal for the purpose of the research study. Tables, graphs, histograms, charts, etc were constructed, and these were used to compare the variables under study. Content analysis was opted for as the instrument ideal to analyse open ended questions.

## **1.7 SIGNIFICANCE OF THE STUDY**

In view of the growth of project management as a discipline and the increase in the use of IT in our daily lives, the execution of projects will need to grow with the growth of the demand for IT projects. The researcher is of the view that this study will assist in adding knowledge on the study of effective IT projects execution processes by the project leaders.

## **1.8 ETHICAL CONSIDERATIONS**

Individuals have rights and the researcher made an effort to inform the participants of their rights in the research. *Welman et al (2005:181)* posit that there is need to show respect for the right of individuals as a universal principle, and honesty and respect by the investigator is important. The generic principles constantly invoked in ethical considerations are: no harm should be done on the participants, participants should participate freely without pressure, no unethical questions should be asked of the

respondents, there will be no pressure put to a participant to answer certain questions participants are free to withdraw at any stage of the research without problems.

The researcher has an obligation of making sure that all the participants' information is treated with highest confidentiality so as to preserve human dignity. Welman et al., (2005:181) stated that there are three stages that ethical consideration should be observed, however, Flick (2011: 216) discovered eight principles of research, and they are listed below:

- Have the ability to justify why it is necessary to do a research about their issue;
- Be able to explain what the aim of the research is, and what circumstances will the participants be subjected to;
- Should be able to explain in detail the methodological procedures in their projects;
- Able to estimate whether their research acts will have ethical relevant positive or negative consequences for the participants;
- Assess possible violations and damages arising from doing their project – and be able to do so before they start the project;
- Possible violations and damages identified should be assessed according to principle 5;
- Should not make statements that are false about the usefulness of their research;
- Current regulations of data protection should be respected;

## **1.9 CHAPTER CLASSIFICATION**

**CHAPTER 1;** introduces the study, reviews literature to develop the, problem statement, research objectives, research questions, research methodology, data collection tool, data collection methods, data analysis, ethical consideration and conclusion.

**CHAPTER 2;** The chapter focuses on leadership, the primary theories of leadership, competencies, the different types of leadership competencies and project-relevant competencies.

**CHAPTER 3;** **discuss the team** - the team dynamics, team selection and construction, the motivation of the team members, factors that demotivate teams and

allocation of tasks to the teams, the role of a leader on team motivation and performance.

**CHAPTER 4;** the research design, research methodology and types, qualitative and or quantitative, target population, sample, sampling methods, sample size, data collection, and data reporting.

**CHAPTER 5;** Data editing, cleaning, coding, capturing, analysis, reporting, interpretation and the final reporting.

**CHAPTER 6;** Summary of findings, conclusion and recommendations, limitations of the study and scope for future study.

## **1.10 CHAPTER SUMMARY**

Increasingly the project management profession is confirming the importance of having a project leader as a critical determinant of the success of project execution, the presence of technologies, techniques and modern tools has not radically challenged the failure rate of projects. Meanwhile the industry increasingly think that management-by-projects is the answer to most of their undertakings. For most of the time the primary focus on who should be the project manager was based on the academic qualifications the individual had. As such engineers needed a qualification and applications experience to be promoted or selected as project managers in an engineering enterprise. That, complemented with technology and modern equipment was assumed to suffice, but projects continued to fail. This suggested that beyond technical qualifications there was a missing element which defied the logic of good qualifications equaled successful project execution. There appears to be an acknowledgement that the practitioners are human beings first before they have any qualifications, hence the focus is moving to recognizing the importance of the human element. The study utilised both quantitative and qualitative approaches to collect and analyse data. There were 223 questionnaires administered to employees. The Excel Spread Sheet (ESS) was used to analyse the quantitative data, and content analyses for analysing the qualitative data. The results were presented in tabulated format. From the findings of the study, recommendations were made to the project managers of the selected SOE.

## **CHAPTER 2:**

### **LEADERSHIP THEORIES AND COMPETENCIES**

#### **2.1 INTRODUCTION**

Many researchers are trying to define the concept of competence and its importance for the projects. The current path of leadership competencies research is aimed at identifying leadership competencies of the project managers in the organisation, and identifying the impact of these competences on the team performance. Previous studies explained the phenomenon of competencies often emphasise its essence and importance in projects, which plays a decisive role in ensuring the efficiency of teams. However, leadership is not only a leader, but also an individual, regardless of the position he or she has (Silingiene, 2011:65). It is relevant to find out which leadership competences are most important and how they are expressed by project managers and analyse them in the context of the entire project. Today leaders in organisations focus on production.

#### **2.2 THE 10 KNOWLEDGE MANAGEMENT AREAS**

The PMBOK (2008) stated that project managers need industry knowledge, project management knowledge and leadership skills in order to manage projects teams effectively. The same view is echoed by Cunningham (2017: 21), confirming that a good manager must understand both human and technical aspects of a project. There are tasks that have to be performed which may not be strictly hard skills and may have more to do with the other stakeholders (Kazadi, Lievens and Mahr, 2016:525 - 540). The PMI has done work regarding the requirements for project managers and the knowledge necessary to enable them to play a meaningful role. The role of the project manager is viewed as that of a facilitator, a mentor, a coach, a coordinator as well as leader (Massillon, 2018: 5). The roles which are acknowledged in this study include general management skills, knowledge of the generally accepted Project Management areas and industry specific management knowledge. There is a noticeable increase in the acknowledgement of the



importance of soft skills (human relations) as the panacea for the unprecedented failure of project execution processes.

PMBOK (2018) gives a generic list of critical knowledge management areas that should be in the project manager's kit of competencies. The PMI continuously sponsors and commissions studies on project management to develop the discipline, and there is a significant shift towards human competencies. It is clear, from the PMBOK that knowledge and effective use of these knowledge areas has an impact on the successful execution of projects. Engineering projects that are managed by highly qualified technical engineering professionals continue to record high failure rates (Ruia, 2017: 12,20). There is a great need to reduce the high failure rate especially as the industry moves towards extended management-by-projects. The 10 project management knowledge areas address numerous aspects of the competencies required to effectively execute a project. Whilst this may be there, it remains merely as a list until the knowledge is converted to practical use, appropriately and within the confines of the type of project. It may be necessary to establish also that contingency theory leadership is most ideal in project execution (Deep & Asim, 2017: 11, 23).



Figure 2.1 PMBOK Knowledge areas

Source;[www.projectmanager.com](http://www.projectmanager.com)

The PMBOK guide divides the knowledge areas into two parts, namely; the project management processes and project management knowledge areas. These can be understood as critical components needed in the project manager's competency kit.

The process is what constitutes the life cycle of a project or are simply referred to as the 5 Project Management Processes, namely; project initiation, project planning, project execution, project monitoring and controlling and project closing (Pengb, 2016: 48–56). There are a series of activities following one after another, the project processes can be defined as different stages (the path) followed in the life cycle of a project (Finnveden, Hauschild & Ekvall 2009:21).

### **2.2.1 Project management processes**

**Project initiation;** this is the initial process of the conceptualization and creation of the idea of having a product (project) that is expected to meet certain objectives (Keeyasa & Huemann, 2017: 96). This requires the development of a mind map (conceptual framework) which should be clearly defined with the objectives known to be known achievable. This stage involves much of thinking and may be followed by rethinking on what would be most ideal until the concept is clear and acceptable (Burnes & Cooke, 2013: 408,425). The basic questions to be answered in the initiation stages may be, namely;

**What is the problem?** Too often customers have a project in mind because they are thinking of a problem which the end project of the project execution will satisfy their need (Gemundena, Lehnerb, & Kock, 2018: 147,160). Or it may simply be a desire to develop or create or fulfill a wish, for this to be accomplished a project may be initiated.

**Why is the client pushing for it?** Reasons for which the client needs the product have much to do with the way the product may be designed (Udechukwu, Melanie, Max & Stuart, 2011: 268,278). Projects are generally customer specific and have well defined objectives to be achieved, thus this influences the product design.

#### **What are the chances of succeeding?**

Not all imaginations can be converted to reality, and there is much more to it (Heracleous & Klaering, 2014: 39,131). As such, careful thinking, including both technical training and experience in the type of project become of tremendous value.

**How will we evaluate success?** There is a need to map out a plan and program as realistic as can be, with clearly defined deliverables as measures and milestones of success. Many projects have failed because they were ill conceived and appropriate expertise and conceptualization was not applied from the initial stages (Lingc, 2016: 141,151).

**What are the technical specifications?** The technical specifications are necessary as they decide on the ability of the project contractors to take the job or not. If they think that the technical specifications are beyond their means it is only wise not to take the contract, or look for personnel trained in the trade (Louw & Oosthuizen, 2011:67).

**What is the budget and budget breakdown?** The budget is critical in two ways, so that it will be enough to cover (or not to cover) all the expenses and costs involved. Alternatively, if the costs exceed the available budget, it is a failed project before it is started as this will not be enough for the project (Heracleous & Klaering, 2014: 131,161).

**What time is required for this?** Time like budget and quality are critical factors used for measurement of the success or failure of a project execution process (Bunmi, 2007:45,73). Extension in time may mean cost overruns and the possibility of running out of funding or low profit for the contracting projects company.

**What are the likely risks in the execution?** Risk identification at the planning stages normally comes from good training and experience, proper risk identification allows for risk aversion (Harrison & Lock, 2014:34). A risk well defined can be managed to reduce the possible negative impact of the unplanned for deviation (Gray & Larson, 2008:131).

The project initiation phase is in a sense the foundation of the whole processes that follow in the execution of any project (Crawford, 2007: 220,228). This process informs what will be done, how it will be done, when it will be done and sometimes also if it is achievable. At the conceptual stages much of thinking, disagreements, and conflicts and other unsavory things happen. Yet a project expertly conceptualized may mean the change required from the project and met objectives that may be life changing. Is

this expertise taught in any academic syllabus for those future project managers? When the project initiation phase is complete – it is recorded in a **Project Initiation Document**.

There are different activities that are required in the process of the project initiation which may need specific knowledge and experience (Cleland & Ireland, 2006:4,5). Generally, people who have been involved in such projects may be of tremendous assistance, including some level of training in these aspects. Technical training and experience brings allow for some imaginations that may improve on the conceptual framework of the project being conceived (Crawford, 2006:74,97).

- **Project planning;** project planning is the process of deciding on how things will be done during the execution process of the project (Muller & Turner, 2010: 437,448). The project had tools and techniques used to plan for the execution – it is based on the project initiation document. It includes aspects like communication plans, risk management plans, resources required including where they should be used, Gantt charts, PERT, Agile applications and CPA charts, (Changd, 2015:3,15). All these documents require special training, as they are critical tools and techniques to facilitate the execution of the plan.
- **Project execution;** this is the process of converting the planned ideas into deliverables as envisaged in the project initiation document and the plan. This is the implementation phase of the agreed on activities and procedures and processes with the milestones and deliverables clearly stated. Execution is guided by the scope of the work to be done as well as the plan as informed by the project initiation document. As key success factors the process is well defined with the roles and responsibilities of the team members well organized. Part of the activities involved in the execution process are listed in table 2.2 below.

**Table 2.2 Processes in the project execution process**

1. Need to develop a formidable team.	2. Procure resources according to plan
3. Convert the project plan into deliverables	4. Allocate resources according to tasks
5. PM to direct and manage project execution.	6. Set tracking systems to monitor and control.
7. Defining of tasks and roles for execution	8. Regular report on project progress status

9. Construct Gantt chart to estimate progress	10. Construction of PERT and CPM tools
---	--

**Weaver, 2014: 1382-1394**

**Executing** is not a one-stop-action, but a series of activities and tasks in different aspects of the undertaking. Some of the can be done simultaneously whereas others follow the completion of other tasks – the Gantt chart would clearly show this (Fernandez, 2009: 10,17). Together with this is the need to coordinate people and materials resources together with constant coordination with both external and internal stakeholders. All this will be measured against the plan to pre-empt any possible undesirable deviations from the original map or path to be followed.

- **Monitoring and controlling;** this ensures that the execution is seamless and the tasks are performed at the appropriate times and according to the plan (Junge et al, 2016:10, 17). This keeps the project on track, this is effected through systematic collection of data to enable the project team to make informed decisions and keep pre-empt options ready.

Pajares and López-Paredes (2011: 615,621) suggest that a properly monitored and control execution process assists in avoiding crises management by simply identifying deviations in advance. Monitoring and controlling consistently reviews the performance and makes adjustments where necessary to keep within the prescribed plan. The control process will generally focus on the operations listed in table 2.3 below.

**Table 2.3 Focus area for control processes**

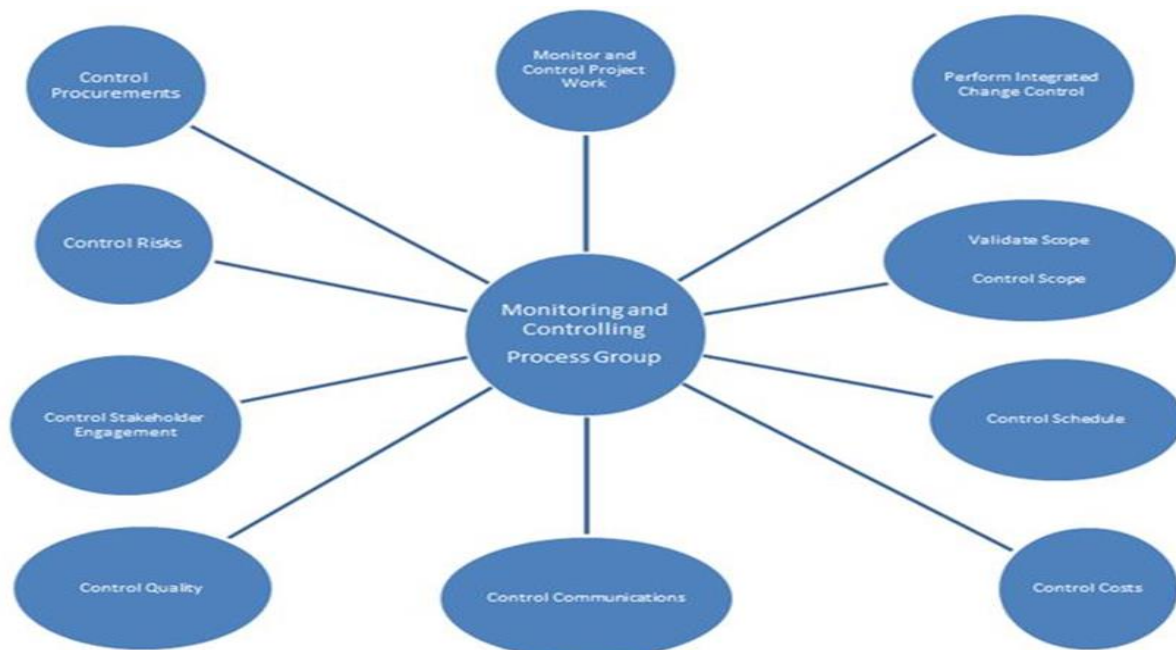
Planned process versus the actual	Identify deviations that cause risks
Plan on corrective actions where needed	Check output against documentation
Constant forecast on resource allocation	Check budget vs actual at all centres
Identify adherence to scope change plan	Identify scope change needs in time

**Source: author’s construction**

According to Womack, James, Jones & Daniel (2010:254) the process of monitoring and controlling needs much more than merely “checking,” adequate training and experience will help. Use of lessons learnt handbooks will also help facilitate both the learning on the job as well as use of other people’s experience. Most of this should

have come from a textbook during training if this was included in the syllabus and development of curriculum.

Monitoring and controlling uses numerous project management tools and techniques, some of which are, namely; work breakdown structures (WBS), Requirement Traceability Matrix (RTM), control chart, Gantt charts, review and status meetings (White, Diana, Fortune & Joyce,2002:5). Cederling and Wedlund, (2015:73) postulated that most of these techniques should be taught to project management students during training and education in their preparation for the project management career. The inclusion of industry-experienced academics in the writing of textbooks may help fill in this glaring gap in training. The competencies required will be informed by the type of tasks to be performed, and the ability of the project leader to develop and retain those competencies (Wetekamp, 2011:898), Review and status meetings further analyse problems, finding out the status, any changes and identifying why whatever happened (good or bad) happened. This will assist the team in learning lessons to be used in future as lessons learnt. They can also highlight any issues that might happen later. Figure 2.1 below illustrates the processes and relationship between many activities and monitoring and controlling. This is an indispensable competency for effective project execution.



**Figure 2.2 Elements of the project process that needs monitoring**

**Source; Winch, 2014: 721–731**

Project failure rate is disappointingly high, especially in engineering projects with IT topping the list (Aliport & Isazadeh, 2008:315). Monitoring and controlling at every milestone may assist in identifying risks that may cause the unwanted project failure (Bourque & Lethbridge, 2002:10). This also assists in keeping watch on the other critical determinants of project success like, scope, time, quality and budget.

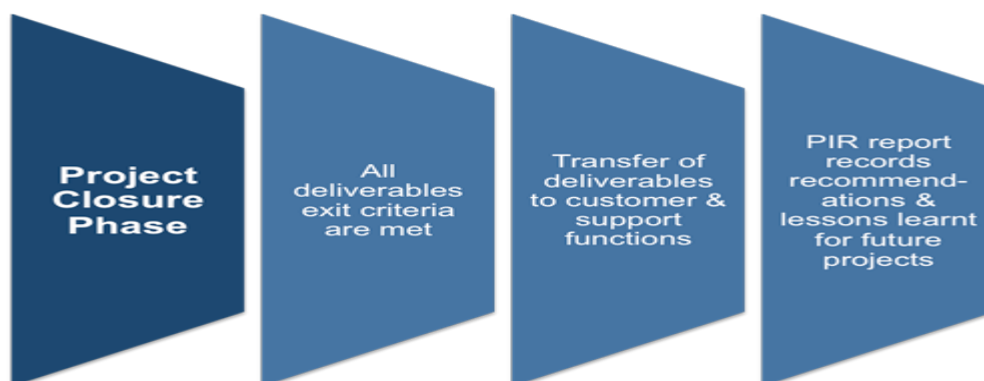
**Project closing;** Xianhai (2012:189) postulated that the closing phase signals the end of project activities and the ultimate end of meetings on project progress. This is the final phase of the project and the project deliverables are now examined with a checklist to confirm that whatever was listed in the agreement with the customer is adhered to Cohen (Kashi, Rozenes & Ben-Gal, 2016:22). This is the stage (phase) where all deliverables are finalized and formally transferred, and all documentation is signed off, approved, and archived. The project manager and the team have no job anymore. Table 2.4 below illustrates the close out phase.

**Table 2.4 Problematic closeout phase on an IT project**

<b>Required outcome</b>	<b>Example of oversight</b>	<b>Scenario-based example</b>
Assurance that all the work has been completed	Scope elements are not done, (because they were not of high priority, part of a change request that was approved but not implemented, re-planned to take lower priority, or constantly delayed because of resource (or other) constraints.	The IT team has completed the development of an application. The application was fully tested and accepted by the business and users. A few months later, users look for basic “how-to guides” but never find them, because they were seen as a secondary product and of lesser importance than the application itself.
Assurance that all agreed upon project management processes have been executed	Management processes are overlooked, oftentimes intentionally, on the premise that they are minor, irrelevant, or purely on the premise that the project manager does not have the time, focus, or bandwidth to carry out those processes.	At the end of the application development project, the project manager is required to close the contract with the vendor who provided him with two HTML developers—but hasn’t—on the premise that this is a minor administrative matter and everybody knows that the project is over.
Recognizes the formal completion of a project	Stakeholders do not realize that the project is over and continue to treat it as an active project, requesting changes, modifications, additions. This would result in scope creep, as well as tying resources unnecessarily to the project	There is no formal end to the application development project, and hence developers’ time is still allocated to that project. They are not free to work on other projects or tasks, and stakeholders continue to view this as a long-term project.

**Source: James and Brant, 2019: 203-211**

This marks the end of the processes or stages in the execution of a project, a careful look at the inceptions shows that there are things left undone. This table also shows us that there are differences in the understanding of a completed project, the customer might refuse the handover (Dolfi & Andrews, 2007: 682). This may mean reworking and correcting or doing those things that were not done but yet expected to be done. Take note also that it is not always exclusively the responsibility of the project manager. Too often the customer changes the scope (scope creep) and that changes the whole triangle (Chena & Merwe, 2013: 401,411) with possibility of delays, less or more material, and budget problems. It calls for competency on the part of the project manager to be able to negotiate the scope change, the implications and reworking of the budget, the time, the quality in view of the new scope. In all this teamwork is needed and the project leader needs the ability to use relevant skills for the execution, or the leader may delegate (Farh & Chen, 2018: 97,110). There are however certain skills (technical) and responsibilities that a project leader may delegate to team members, where they have that competency. The one skill that cannot be delegated is the leadership skill, which is primary the ability to mobilise and influence performance, including the other engineers involved. An ideal close out phase is illustrated in figure 2.2 below.



**Figure 2.3 Ideal project closeout phase**  
Musawir, et al (2017: 1658, --1672)

The ideal closeout phase will identify and confirm that all things agreed on from the beginning have been attended to and the criteria was met (Rietzschel, 2011:337). The deliverables can be cross checked using a check list based on the charter, and the project manager submits this to the customer (too often to senior management) as a job completed as per agreement (Packendorff, Crevani & Lindgren (2014:7). The



project manager takes with him the Project Information Record (PIR) and the project lessons learnt (PLL) and the work is complete (Rietzschel, 2011:337).

### 2.2.2 Project management knowledge areas

These knowledge areas are competencies that project managers need to have in their kit for the execution of the projects. It is with much research over years that the PMI came up with this list, research continues on different aspects of projects, and the best practice to reduce if not to eradicate project failure. Each one of these 10 knowledge management areas has critical aspects where understanding is necessary to be able to use the knowledge area effectively (Hanisch & Wald, 2011: 22). The areas are discussed briefly below.

- **Project Integration management;** a project as different activities going on at the same time and all these activities managed by different sub-team leaders will be components of the same product at the end. Inevitably therefore integrating all the activities in the project is a critical function in the management of the execution processes (Aliverdi, Naeni & Salehipour, 2013: 423). There are 7 key processes involved in the integration management of a project. These are illustrated in figure 2.3 below.



Figure 2.4 Elements of Project Integration Management

Zhoua, (2012:158)

The different activities taking place at different places and sites are to be managed from the central project administration office. Too often the project is divided into WBSs and each one of them has a team leader responsible for the operations in that unit (Colin, 2015:65, 76). The larger the project, the more complicated it becomes and the more of these activity centres the project is likely to have under one overall project manager. All the seven elements are to be headed by this project leader, some through delegation, hence the need for a larger tool kit of competencies.

- **Project scope management;** involves the work that is to be accomplished or service to be provided as a project. The project scope informs everyone involved as to what should be done, or what the deliverables are as required by the customer or sponsor. The changes in scope (scope creep) alters the project as it was agreed on at the beginning (Colin & Vanhoucke, 2014: 107,108) and requires that new boundaries of deliveries be decided and be agreed on. The changes will affect the management system and there is a need for leader competency to manage the scope change effectively both working with people and coordinating the new scope. Scope management competency requires that the project leader able to do the 6 processes in table 2.5 below.

**Table 2.5 Six processes of project scope management**

○ Plan Scope Management	○ Collect Requirements
○ Define Scope	○ Create WBS
○ Validate Scope	○ Control Scope

**Source: own construction from literature reviewed**

According Maaleki, (2019:254), this would require technical competencies as these will be alterations to the physical aspects of the project itself, and a qualified individual would be competent enough to do that. Not forgetting that the project leader works through people, who, even though they have skills, they are social beings (Maaleki 2018:74). The soft skills (competencies) become necessary to enable people to be motivated and perform well.

**Project Schedule Management;** the project leader needs to develop a schedule specific to the project including among others, time to complete certain tasks, the

availability of the required skills and at what times and what resources and when they are available Dennis, Scott & Lindsay (2014:398). This also includes identification of the tools and techniques to be utilised for the implementation Serra & Kunc. (2014:54). This calls for the hard skills competency which has to do with product knowledge so as to understand and explain to subordinates what exactly is to be done Morcov and Pintelon, (2020:03). The skills to plan, to schedule resources and control or keep a project within timelines requires both hard and soft skills Dennis, Scott & Lindsay (2014:398). There is also a need for the leader to be able to use tools and techniques available to facilitate effective scheduling and allocation of resources appropriately Liliane and Rob (2019:87). Six important processes for project schedule management are listed in the table 2.6 below.

**Table 2.6 Project schedule management**

○ Plan Schedule Management	○ Define Activities
○ Sequence Activities	○ Estimate Activity Duration
○ Develop Schedule	○ Control Schedule

**Source: own construction from literature**

Schedules are a critical aspect of effective project management, the needs to be used some formula of sorts (which comes with experience) if the schedules are to be helpful in keeping the project processes well-coordinated (Deblaere, Demeulemeester & Herroelen, 2011: 63,74). Hard skills are primary here in that one needs to know the activities, the tasks and the sequence to be able to schedule well, but human skills still remain critical for effectively managing the team.

- **Project Cost Management;** the budget is an element of the triple constraints used to measure successful execution of a project. Beyond technical engineering skills there is need for technical accounting skills to be able to plan and control the budget. Many projects could not be completed because the project run out of money (Fleming & Koppelman, 2010:56), the fortunate ones simply have cost overruns but can be completed. Required are those skills for activities as planning, budgeting, estimating, financing, funding, managing, and monitoring costs. Processes in the Project Cost Management system are, namely;
  - Plan Cost Management

- Estimate Costs
- Determine Budget
- Control Costs

Cost is a critical element in that there are possibilities of pilferage, misuse, over expenditure and other such practices. This aspect needs to be managed, monitored and controlled regularly, an understanding of some accounting is a welcome competency.

- **Project Quality Management;** the value of a project is determined by the quality it is perceived to have, and generally this is determined by meeting certain specifications (Hartmann & Briskorn, 2010:1,15). These will be decided on by the project sponsor, of course with consultation where technical expertise is required, suggesting that quality is more of a technical competency. At all times the project is expected to meet the stipulated and agreed on standards as per definition (Leu & Lin, 2008: 813-819). Technical competencies are paramount, but the human element remains there because the implementation of the tasks is done by human beings after all. Three important processes for quality management are, namely;
- **Plan quality management;** there should be in place a plan for the quality starting from the specs, the material, and the workmanship all this focused on the stakeholder's expectations and technical specifications (Deming, 2013:129),
- **Manage Quality;** there is a need for continued monitoring, starting from the material supplied, the workmanship is critical and there should be no relaxing on the elements that allow for that quality (Stewart, 2015:240),
- **Control Quality;** this should be from continued benchmarking against the requirements as per stakeholder specifications. Constant communication with the stakeholder may be important – that human element is critical (Manges, & Ward, 2015:245).
- **Project Resource Management;** resources could be thought of as human resources, materials resources and any other inputs that may be needed for the project (Madadi & Iranmanesh, 2012: 751,761). In this part the focus is on human resources which will include the admin staff, the sub-team leaders and project team members. To complete the project, the manager must understand the team and run them properly, suggesting the need of some level of emotional intelligence

(EQ). A clear knowledge about the resources at hand (people, equipment, facilities, funding) and the knowledge and ability to allocate them appropriately is critical for effective execution of the project (Martens and Vanhoucke, 2017: 274,286). The processes for the management of these resources are listed in table 2.7 below.

**Table 2.7 Project resource management processes**

○ Plan Resource Management	○ Estimate Resources	Activity
○ Acquire Resources	○ Develop Team	
○ Manage Team	○ Control Resources	

**Source: own construction from literature**

The ability to plan and allocate resources is critical competency for any undertaking, be it business operations or project management (Martens & Carvalho, 2017: 1084,1102). The resources mean funding, involve suppliers and many other economic factors, and delayed supplies mean delayed production. Leu and Lin (2008: 813,819) opines that a knowledgeable and competent manager will consider resources as a strategic operation requirement as delayed may never be recover, specifically in projects. There is a need to manage the resources properly, be they material, the project team and other services that may be necessary.

- **Project Communications Management**; arguably the single most popular cause of failure in project, 80% of the project manager’s time is spent communication (Vanhoucke, 2011: 416,426). All the teams have got to be kept informed of activities in the other units, any requests need timely feedback, and every piece of information is valuable. Communication keeps the whole organization together (Vanhoucke, 2014:78) and strives to keep everyone in touch and informed, well informed teams are motivated teams. Communication is the glue that keeps the whole project integrated and operating towards the same goals and objectives.
  - Plan Communications Management
  - Manage Communications
  - Monitor Communications

Information needs to be communicated in time, to relevant stakeholders and in a format ideal for them, and this information must be readily available (Littlefield &

Michael, 2012:12). Communication enables the stakeholders both internal and external to be able to get the corporation needed by the project manager from other stakeholders. There is need for the stakeholders to know regularly about the progress of the project, including measuring, forecasts, problems, risks, performance and any existing issues.

- **Project Risk Management;** possible risks and the sources need to be identified from the beginning (where possible) and plans made on how to mitigate the risks. The extent of the impact of the risk needs to be estimated also and the impact either reduced or averted totally. Eight project management processes ideal for the Risk Management Knowledge Area illustrated in table 2.8 below.

**Table 2.8 Project risk management areas**

Identify possible sources of risk	○ Plan Risk Management
○ Identify Risks	○ Perform Qualitative Risk Analysis
○ Perform Quantitative Risk Analysis	○ Plan Risk Responses
○ Implement Risk Responses	○ Monitor Risks

**Source: own construction**

According to (Littlefield & Michael, 2012:12). Qualitative and quantitative risk analyses should be conducted to identify and analyze risks, then a risk response plan can be developed using a risk development plan however, some of the risks and the impact can be sourced from the organisation’s lessons learnt records, and this will provide enough information to mitigate the risk.

- **Project Procurement Management;** procurement is not generally the competence of the project manager, but the material to be procurement should be recommended by the project leader. Procurement involves the process of purchasing or acquiring products, services, or results from outside the project team (Mahmood, Asghar & Naoreen, 2014: 2779,2783). It is the project manager’s competency however to keep track of all purchases, the quality, the cost and the delivery times as these impact on project operations. The process of procurement and the project manager’s role should start from the initial planning stages of this

project to avoid future problems (Martens & Carvalho, 2017: 1084,1102). It will be most appropriate for the project manager to be involved throughout the processes leading to supply contracts, etc. The project procurement management process has three activities that should take place, namely;

- Plan Procurement Management
- Conduct Procurements
- Control Procurements
- **Project Stakeholder Management;** this is recorded last in the PMBOK (6<sup>th</sup> edition), but stakeholders play a very important role in the execution of a project. Should be noted that there are internal stakeholders (staff compliment in the organisation) and external stakeholders who have interests in the organization and specifically the project (Doulabi & Asnaashari, 2016: 409,415). It is crucial to get stakeholders on board from the beginning, good communication and conflict resolution competencies will assist in keeping the stakeholders on board. Keeping them on also will allow for timely information on any changes to the project to avoid late suggestions and disagreements when work has progressed. Zou and Zhang (2009:61,77) posits that leaving stakeholders out might affect the quality, the time schedule, the budget and even the morale of the team to perform when the talk of changes later. There are four processes involved in the project stakeholder management structure, namely;
  - Identifying Stakeholders
  - Plan Stakeholder Engagement
  - Manage Stakeholder Engagement
  - Monitor Stakeholder Engagement

It is expected that a project manager who understands these knowledge areas may be able to have the competencies required to run a project efficiently (Acebes, et al. 2014: 423,434). The skills or competencies acquired by knowing and understanding these knowledge areas will enable the project leader to avoid crisis, and scope deviation (Nasseri, Widen & Aulin. 2016: 580,601) and enable the project manager to make proactive decisions. A thorough understanding leads to proficiency in the management of processes and people reducing the project failure rate. Adequate knowledge of these areas allows for a balanced project manager who will most likely embrace the diversity of roles to be played. Fallahnejad (2013:136,146) stated that the

average project manager spends approximately 80% of the time communicating in one form or another. Hyvari (2016:217) reckons that of all these competencies, communication remains the inevitable competency that threads through the entire system. Building of effective teams, solving of problems, providing direction and vision for the project, coaching, delegating, progress reports, feedback sessions, all hinge on communication (Cohen, 2012:192). The different knowledge areas listed above need to be integrated and all the activities in different Work Breakdown Structures (WBS) headed by sub-project team leaders are all part of the same project.

### 2.3 COMPETENCY IN USE OF TECHNIQUES AND TOOLS

Apart from all the knowledge required by the project manager as postulated by the PMBOK, it is important to identify tools that are in use by project managers. Competencies in the use of these tools helps with efficiency in the execution of many other activities. There are numerous tools that can be used, though not exclusively in project management, but largely so for most purposes. Many tools, techniques and technologies have been developed which are meant to facilitate the efficient and effective execution of operations (Burke, 2019:24). The critical aspect of a tool is its relevance to the task to be performed, and its effectiveness depends on the ability of the user. (Jowah, 2015:1762,1774). Some of the tools commonly used in the execution of the projects are listed in table 2.9 below.

**Table 2.9 Some project management tools**

Gantt chart	MS Project
PERT	Kronos
CPM	WBS
Milestones	MS Project

**Source: Jowah, 2015:1762-1774).**

The ability of a project manager to utilize a tool is itself an irreplaceable competency as many people have access to tools which they cannot use. Project managers are therefore expected to have the ability to identify tools relevant for their application and be able to use them, or subordinate the tool to someone who can use it effectively and efficiently. In the same vein there are techniques that are used for the execution of the projects, and these need to be understood equally well by the users (Zareei, 2018: 756,759). The effectiveness of a technique is equally directly proportional to the knowledge of the user, relevance of the technique and the task to be performed.



## **2.4 NEGLECTED HUMAN ELEMENT**

There is global acknowledgement that projects are designed by people, implemented by people to benefit people, and people are the only constant in any project. This does not ignore the technical aspect which is the hard skills, but acknowledges that it is not hard skills that implement. Davis (2014:45) states that the manager's competencies are critical in making the project processes flow and that without much of which it would be difficult to coordinate the activities of a team. On the average a manager spends up to 80% of the time communicating (Strohmeier, 2012:45), this indicates the need for a project manager to focus on human relations. The continued empowerment of project leaders with more and better competencies becomes indispensable (Missonier, 2017:09), and this should start during the training for hard skills. The syllabi for hard skill training tends to leave out the single most critical element, the performers themselves (Geoghegan & Dulewicz, 2018:60). Consideration should be made to the fact that over 92% of the projects that fail at the rate of 52% - 61% are managed by technically qualified and experienced professions. Butler and Chinowsky (2016:122) concur that unfortunately, the human side competences for project team leaders has not received adequate attention. Adequate and appropriate soft skills training should be provided to hard skills professionals if work has to be done effectively and efficiently (Gehring, 2017: 50). The effectiveness of a project leader is judged on the basis of their ability to successfully execute project processes (Macintosh, 2018:121). The Project Management Institute (PMI) (2016:30) outlines the function of a project manager as, learning, execution and individual skill. When the project execution succeeds, the praise and credit is taken over by senior management for their participation and support. When the project execution fails, the responsibility and the blame is put on the shoulders of the project who it is believed should have made the undertaking a success.

## **2.5 CRITICAL CAUSES OF PROJECT FAILURE**

Too often the focus is put on critical success failures for project implementation, it could be proper to look at the failure factors. Details on the competencies required for effective project execution has been provided, it may be ideal to end the chapter with some information of project failure factors. Numerous reasons have been identified as causes for the failure in or of project execution processes, with specific emphasis on

engineering projects. The IT industry has recorded up to 50% failure rate over the years (Whitaker, 1999:23,29) yet the operations are done by technically competent managers. Kutsch and Hall (2005: 591,599) define project failure as the inability to deliver a complete project within the time, the cost, the technical specifications and the scope. The greatest puzzle remains why with the availability of all these tools, techniques and hard skills of the managers, projects continue to fail. Following are some of the causes that have been identified.

- **Exclusion of project leader from the beginning;** if the project manager is involved from the start (initiation), they would be able to understand the project and manage with adequate knowledge (Badewi, 2016: 761,778). Deliverables will be clear to them from the onset.
- **Poorly defined project scope;** when the scope is not clearly defined, it leads to confusion on the vision of the project, involving the project leader from start allows for that understanding (Berssaneti & Carvalho, 2015: 638,649).
- **Inadequate risk management;** too often no effort is put on pre-empting risk factors in advance, and there will be no risk response plan when it surfaces resulting in unplanned responses (Klein, et al. 2011: 514,524)
- **Inaccurate Cost Estimations;** too often the estimations are not correct or are affected by inflation (Mastrogiacomo, Missonier & Bonazzi, 2014:44,78) – cost estimates should always have a “buffer” in the event – these are unplanned for risks.
- **Lack of detail in the project plans;** most project plans are not detailed enough leaving room for likely different interpretations which may cause concern with stakeholders (Zwikael & Unger-Aviram, 2010: 413,421).
- **The authority gap may be a destruction;** in matrix organisations the personnel seconded has dual loyalty and the project manager has no control over them resulting in an authority gap (Thomas, et al. 2008: 105,113).
- **Inadequate documentation and tracking;** there is need for regular monitoring and controlling with documentation that can be made reference to (Martin, Pearson & Furumo, 2007: 52,60), this will allow for effective follow and risk aversion.
- **Underutilization of tools;** tools and techniques that are meant to assist in the execution seem to be under used – most probably because the project

managers don't know how to use them or have never been given to use (Petro and Gardiner, 2015: 1717,1729).

- **Looking down upon the unskilled** – the general workers may not be motivated if they think they are despised and discriminated against, the X theory syndrome (Walter & Zimmermann, 2016: 163,179).
- **Failure to adequately track project progress and requirements;** monitoring and controlling is a step by step exercise and purely a project coordinator's responsibility, properly integrated execution provides warning signs of project stress in time and allowing for redress (O'leary, Mortensen & Woolley, 2011: 461,478).
- **Project scope creep;** or the kitchen syndrome - refers to continuous change on the scope of the project too often due to unclearly defined project scope, weak management resulting in poor communication between the parties or the absence of initial project versatility (Kendrick, 2015: 50,52).
- **Inexperienced project managers;** the necessary experience should not be for hard skills only, it should involve largely the human component as that is what affects execution. A likeable engineer can do more work than a very intelligent engineer without interpersonal skills (Serrador & Pinto, 2015: 1040,1051).
- **Little Communication;** there should be adequate communication to all relevant people, timely and in the right format for the recipient (Taylor, Artman & Woelfer, 2012: 17,34). The absence of communication increases uncertainty, increases anxiety and affects the workflow
- **Conflict in project management;** this is encountered at different levels and stages and sometimes throughout the life cycle of the project (Jowah, 2013:715) Needless to state that conflicts will inevitably impact on project management and are experienced at different stages in the life cycle of the project.

## 2.6 CRITICAL PROJECT SUCCESS FACTORS

The study of both success and failure factors is essential in that it will assist the researcher in understanding the competencies required. If failure factors can be treated as risk factors and are identified in advance, they can be averted by developing a risk response plan (Skulmoski & Hartman, 2010:61,80). The risk of the project

execution process failing is a concern for the stakeholders and much time is spent thinking about suggesting alternatives. These success factors as identified by different researchers should be understood as a guide to what is needed in a potentially successful project executor (Zika-Viktorsson, Sundström & Engwall, 2006: 385,394). The ability to know what is required for the project execution process to succeed also speaks to the ability to identify risks and management them in advance. The table 2.10 below illustrates some of the factors considered for successful execution.

**Table 2.10. Critical success and failure factors**

<b>Success factors</b>	<b>Failure factors</b>
<ul style="list-style-type: none"> <li>• Intensive Planning</li> <li>• Strategy</li> <li>• Clear Communication</li> <li>• Actionable Results</li> <li>• Collaboration</li> </ul>	<ul style="list-style-type: none"> <li>• Failure to Plan Effectively</li> <li>• Inadequate Scope Document</li> <li>• Lack of Communication</li> <li>• Not Selecting the Right People</li> <li>• No Management Support</li> <li>• Weak Project Closure</li> </ul>

**Source: Camilleri (2011:67)**

The success of a project execution process has a positive impact on the project team and it may be considered as a sign of triumph. This may bring more determination if the same team will proceed to work on another project together as they were before. Success is a morale booster for the team and will in a sense guarantee that they may have more business coming their way (Sajilan & Tehseen, 2015: 20,34). The lessons learnt register and the project documentation for a successful project execution are always treasured by the team. Barry and Uys (2011) identified 5 critical success factors for projects in South Africa, namely teamwork, project planning, management of the scope, cost management, and competency of the project leaders. Success is measured on the basis of the satisfaction of the customer after meeting all requirements (time, budget and quality) which may only come to be if there was effective communication. The start of this success is the ability for management to appoint a relevant and competent project leader with commitment and understanding of the project team. Such a manager should show leadership with the ability to have learnt from the past (du Randt, van Waveren & Chan, 2014:13) and should have these competencies in table 2.11 below.

**Table 2.11 Competencies according du Randt *et al***

Competent project manager	Applying project methodologies
Technical background of the team	Sufficient/well-allocated resources,
Clear, realistic objectives	Project front-end loading
Organizational support	Good performance by suppliers
Legislation	Political stability

**Source; adopted from du Randt, van Waveren and Chan, 2014:13)**

There is mention of other competencies that are not mentioned in the 10 project knowledge management areas like political stability, legislation, organisational support, technical background, application of project methodologies and clear and realistic objectives. Be that as it may, the competencies will depend on the applications (nature of the project) and this may include the political and economic environment too. Gewanlal and Bekker (2015: 20) identified some competencies not hitherto covered by the previous researchers, and these are illustrated in table 1.12 below.

**Table 2.12 Gewanlal and Bekker critical success factors list**

Communication skills	Leadership style
Planning (integrative)	Define and follow strategic direction
Decision-making/problem-solving skills	Supervision of project team
Level of involvement in the project	Ability to determine cost-, time trade-off
Planning (time and task scheduling)	Emotional intelligence

**Source: adopted from Gewanlal and Bekker (2015: 24)**

The researcher considered other factors not otherwise covered in both the project knowledge management areas as well as those listed in table 1.11 above. Decision making and problem solving are included as these are generally linked to risk factors. Communication appears in almost all discussions on the execution of projects since much of the manager's work is communication.

## **2.7 CHAPTER SUMMARY**

The focus on educating leaders at all levels of the organisation, with a strong emphasis on the effective use of competencies is increasing. This chapter pointed out most important things a leader must do to ensure that leadership skills are applied successfully and also that leadership is the most important factor in motivating

employees and improving productivity of the project team and the entire project. The emphasis is not only for managers also with the team members, this is done to ensure that difficulties and challenges are eliminated amongst project team members. As stated in the preceding literature, the project leader competencies seen in the characteristics of an individual are learnt behavior. Suggesting therefore that a leader may learn how to behave or conduct herself / himself in accordance of the environment in which they find themselves in. it is therefore expedient that all training (formal and informal) in leadership be contingent of the environment, the organization, the followers and the tasks to be performed.

## **CHAPTER 3:**

### **TEAM, TEAM DYNAMICS, TEAM SELECTION AND MOTIVATION AND THE**

#### **3.1 INTRODUCTION**

As alluded to in the earlier chapters in terms of the structure and definition of a project, the project is a short term or fixed term operation. This short term operation immediately creates a unique situation in that it has a predictable end time, budget, scope and the technical specifications (Burke, 2007, 17). In complementing this definition, Larson (2008:201) described Project team as is a temporary team created to deliver a project. The focus in this chapter is therefore the team and the complexities of teams and how these become the panacea for effective project delivery. This chapter will discuss different types of project team, their formation and life cycle, competencies for team leaderships and how they influence team behaviours and team performance.

#### **3.2 THE PROJECT TEAM**

As alluded to above, one characteristic of any project is the presence of multi-skilled people with different work ethics coming together to make one product. Management by projects as it is practiced in the industry involves the coming together of people from functional units and being seconded to the project. This matrix structure creates a serious authority gap in that the different team members know that they are seconded to the project for a short while. Hence they have dual loyalty (Jawah, 2013: 264,273) and are not directly under the authority of the project coordinator even though they report to him their duties. Too often in operations it is groups of workmates in the same organisation or under the same roof. The word team has always been confused with a group and wrongly interchangeably used as one thing, whereas these are two different entities (Cooke, et al, 2013: 255,285). The team needs to be defined to clarify the nature of the structure and by derivation, how the teams function. Various definitions have been advanced, and some of the definitions within the context of the study are listed in table 3.1 below.

**Table 3.1 Definitions of teams by various authors**

<b>Author</b>	<b>Definition</b>
<b>Marco S, 2016: 1,7</b>	Project team is a team whose members usually belong to different groups, functions and are assigned to activities for the same project. A team can be divided into sub-teams according to need.
<b>Geraldi &amp; Söderlund, 2017: 55,70</b>	A team is defined as “an interdependent collection of individuals who work together towards a common goal and who share responsibility for specific outcomes of their organizations”
<b>Chandrasekaran, Linderman &amp; Schroeder, R. (2012) 134,- 151.</b>	The central characteristic of project teams in modern organizations is the autonomy and flexibility availed in the process or method undertaken to meet their goals
<b>Chipulu, Neoh, Ojiako &amp;Williams, 2013:506,517</b>	A team is a group of people linked in a common purpose. Human teams are especially appropriate for conducting tasks that are high in complexity and have many interdependent subtasks.

**Source: own construction**

Whilst have team is a group, every group is not a team (Lenfle & Loch, 2010:32,55), a group by definition would any people who find themselves in one place. They don't have to be there for a particular (singular) purpose, but teams come together for a purpose. Normally, teams are a group comprised of people with complementary, skills and the coming together is meant to generate synergy to achieve the objective.

Shoshana and Raquel, (2010: 27,47) asserts that teams use coordinated effort to complement each other in them by maximisation of their strengths and minimisation of their weaknesses. These are used for a definite period, specifically project teams because once the project objectives are met, and they have no purpose. To maximise their strength team members need to learn from each other and help each other to realise their full potential (Erich, Suzanne & James, 2011: 247, 262). This allows each one of them to perform beyond their normal limitations, and exploit their full potential. Depending on the tasks to be performed teams can be divided into sub-teams which will perform certain specialised tasks at particular periods (Jerry et al, 2010:7,28). The life of the sub-teams comes to an end when the specialised tasks to be performed are as done and completed, but the concept of working as a team generates for team's performance “greater than the sum of the individual members.” Marquardt (2011:133)



opines that other people consider the team to be a panacea that will help integrate people by bringing in best performing managers and workers to work as task forces. However and Hackman (2002:17) opines that the performance of the teams should not be the only focus, that the critical benefit of putting together a team should be that a truly effective team must contribute directly to the growth of its own members.

### 3.2.1 Types of teams

In organisations where teams can be considered as embedded in the organisations, numerous teams are comprised of people from different departments. Increasingly the industries are turning to management-by-projects, as such many of these projects will be in the organisations with specific tasks to perform (Mach, Dolan & Tzafir, 2010: 771,794). Depending on the type of organisation and the structure of the organisation, this will inform on what the requirements will be and this further informs the structure of the team needed for any tasks to be performed. Some teams will therefore involve people from different departments and these are referred to as or classified as cross functional teams (Kozlowski & Ilgen, 2006: 77,-124). The management of the team will depend on the decisions from senior management, and will may involve a senior manager as the project manager. They necessarily have to be coordinated in their own respect, and like all other teams should have a multiplicity of skills complementing each other. Gratton (2015:40,41) opines that project teams must have the right combination of the necessary expertise, competencies and abilities types of personalities if they are to be collaborative. For team effectiveness, there is a need for a team manager with the correct human competencies that will enable team members to be themselves. Ferrell and Coyle (2006:35) suggest that the most ideal team leader is one that focuses on building cordial relationships with the team members and allow them to develop themselves. The combining together of the different skills and the support for each other in the team builds a formidable task force that works together with the same vision (Eikenberry, 2011: 147,148). There other forms or types of teams depending on the classification, the numerous types are listed in the table 3.2 below.

**Table 3.2 Different types of teams**

Multidisciplinary	Interdisciplinary
Interdependent teams	Independent teams
Executive team	Work teams
Command team	Action teams

Project teams	Sports teams
Advisory teams	Virtual teams

**Source: own construction**

According to Kohli and Kettinger, (2014:15) the concept of a team on its own is very simple, but social scientists use different classification methods resulting in the list in the table above. Be that as it may be, the basic and characteristics of what constitutes a team remain the same, these teams are formed for different purposes and their functioning depends on what tasks are to be performed. Of specific interest in the study are the project teams, these have a pre-determined life period (Forsyth, 2006: 351,377) and are operated differently from the other teams that are fairly permanent in their nature.

**3.2.2 Team size, composition, and formation**

Great interests in the function and role of a team in projects gain momentum in the 1980s as the subject of project management gained popularity. The work of Belbin (1981:96,118) focused on defining the role of the team including what constituted a successful team. Numerous other follow up research followed and for two decades the study of the team was a central for much of academics seeking to understand how teams work. The research concluded that there was a relationship between the roles and functions of teams and their ability to provide optimum performance (Davis *et al.*, 1992: 1111,1132). There is no standard size for a team, the size and composition of a team depends on what the team is established for. Determinants of the size of a project team are, namely;

1. Depending on the complexity of the project to be undertaken and the requirements for execution
2. Depending on the nature of the tasks to be performed and their human resource needed for the execution
3. Depending on the technology, techniques and tools used and to what extent these will complement or substitute human resources

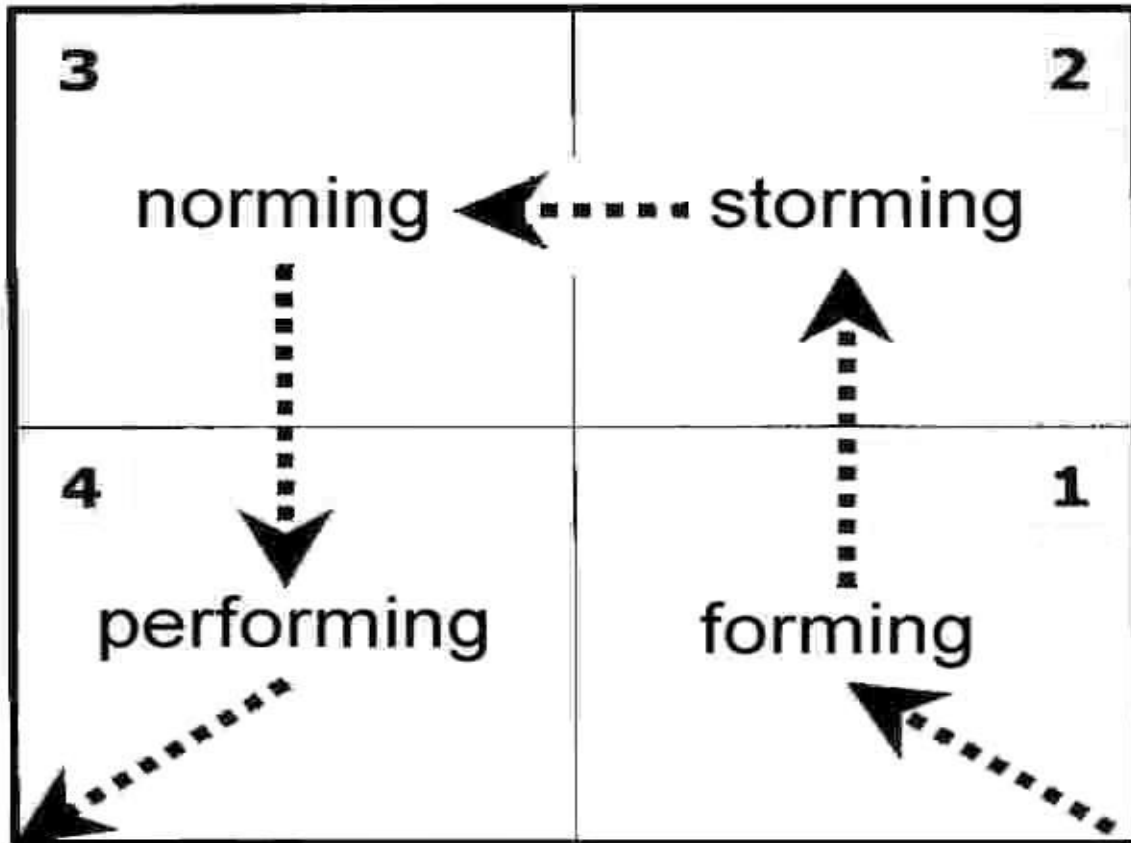
There has not been a fixed number of people who constitute a team suggesting that there is no standard size for a team (Chong & James, 2007: 99,118). In disciplines like

construction of a shopping mall where there are numerous WBSs it may be easy to have a project team comprising of all the heads of the WBSs. Because of the sizes of the malls, the project teams may end up with sub-teams responsible for other specified tasks (DeChurch & Mesmer-Magnus, 2010:32,53). Therefore, the size of a team can only be determined on the basis of the tasks to be performed, and the specialisations required for proper execution. Team performance is a function of the number and the types of the roles to be played by a team member in the performance of the tasks (McDonald & Smith, 2015:59,64). These affect the team composition and determine what should be the optimum size depending on the judgment of the project manager and the individuals involved in the putting up of the team. Cognisance has to be taken of the position (the role to be played) an individual occupies in the team (Abu Zaid & Al-Manasra, 2013: 348,364) as well as the personality traits of the team members. The personality traits will determine the leadership styles needed to effectively manage the team, considering the diversities in personality which is stable and internally driven (Adams, 2009: 111,134). The personality traits married to the role to be played by individual members taken together with the type of tasks to be performed demand specific leadership styles. It is also important to observe that the larger the group the more heterogeneous it is likely to be, this serves as both advantage and disadvantage (Cavazotte, Hickmann & Moreno, 2015: 443,445). Disadvantage because of the greater need for contingency leadership, the balance of which may be difficult a difficult competency to acquire. Conflicts and other such related problems are likely because of the professional, personality and perceptual diversities of the group and how that leads to conflict (Hassan, Asad & Hoshino, 2016: 161,179). Yet, the more varied the people the higher the chances of creativity and holistic approach to the different alternatives of solving problems than in a homogeneous team.

### **3.2.3 The life cycle of teams; Tuckman's model**

Tuckman (1977: 419,427) proposed that teams go through a life cycle which involves amongst others, 5 different stages, namely; forming, storming, norming, performing and adjourning. The experiences of team members are shared and this assists with increased knowledge of the performance of the tasks. This is on its own a motivator for more performance and this strengthens team membership resulting in synergy

required for performance. Tuckman developed a model for the construction of an effective team, this is illustrated in the figure 3.1 below.



**Figure 3. 1 Tuckman's team forming and development model**

Source: Tuckman (1977: 419,427)

This team life-cycle model helps in explaining the development of a team, which is believed to move through levels of immaturity (when they start), maturity, ability and finally they reach the level of relationship development. Ali and Ali (2017:99,106) suggest that the team leader must change leadership at every stage to suit the situation, situational leadership style. There is a need for closely observing the interest and personalities of the team members, and tying this to the tasks at those levels. Therefore, the competencies required at the different levels of team development would be different and situational. Sequence that is followed is as illustrated in figure 3.1 above, 4 stages starting with forming, storming, norming and performing. Each stage is characterised by specific feature, later a fifth stage was added to the model as an adjunct and was called adjourning.

**Stage 1; Forming** - the team depends largely on the leader to provide direction, set out objectives, state the vision and develop the plan to be followed by the team in the future. The leader needs to play a motivational role (Natvig & Stark, 2016: 675,681) and the clarity of direction is important in motivating the team to stay together at this stage. The leadership styles at this stage may be directional and or charismatic – to build the trust (Caldwell, 2010: 104,113).

**Stage 2; Storming** – There may be too much to learn for the team members at this stage, learn to know each other, learn to understand how they will complement each other and the goals ahead. Personality clashes may appear causing or preparing for possible conflicts (Khalid, 2011: 185,189) as member position each other. The leader needs to focus the team on the objectives to be achieved and allow transition to take place – ideally transformational leadership may do contingent to other factors. There may be need for a bit of coaching and selling styles to complement the chosen style (Van Dijk & Kluger, 2011: 1084,1105).

**Stage 3; Norming** – gradually the members adjust to the “new normal” and begin to see each other role and areas of agreement resulting in starting to help each other in their weaknesses (Groves & LaRocca, 2011:37,55). The team starts taking shape and identification of commonalities increases and consensus may start building leading to team cognition (Clarke, 2013: 22,49) as they identify more with each other. The roles and responsibilities become clearer and the areas needing complementation are identified and the team members start covering for each other. Generally, commitment emerges strengthening the new unity and allowing for the development of synergy, the increase in team processes and work relationships take shape. A relationship orientated leader (Antonakis & House, 2014: 746,771), but very focused and situational may be the most ideal, adjusting the styles according to the team dynamics.

**Stage 4; Performing** – The concerns about where the project is about have been cleared, the relationships and initial clashes are now adjusted to and the team members show commitment and start performing their roles. Depending on the level of expertise and the type of tasks to be performed (Garcia-Morales et al. 2012: 1040,1050), the directing leadership style is no longer necessary, the team-members’ takeover responsibility. The project leader now plays a coordination role as team autonomy increase leaving the leader to take care of critical over-arching decisions to

do with inter-unit operations. There may be emergence of inter-team disagreements (Kark, 2011: 423,438) as the teams develop intra-team unit and synergy identifying themselves as one unit or family. Members start supporting each other, covering for each other's weaknesses, learning from each other's strengths and good leadership promotes motivation and team synergy. The team is autonomous and may ask for limited assistance from the leader (Craig & Mary, 2014:57).

### **3.2.4 Team development**

The objective of establishing a team is to try and execute a project, and projects by their nature have high failure rates for many reasons (George, 2011: 147,164). The first need therefore is to have a project leader with the necessary competencies for project team management through the project execution phases. Generally, the people put in to be the project leaders come from the discipline and it is taken for granted that project implementation requires more the technical skills. Lanaj et al. (2012: 998,1034) posits that training in relations and interpersonal skills is required for all participants in the project as they need each other to function in the team.

Too often little focus is put on the human element with all things taken for granted because the people have the technical know-how. Avolio (2013:67) posits that the project leader needs to treat members equally and consistently help the team members, sometimes in need be in private. There is a need for that managerial competency that instils faith and trust and allow the team members to know and accept that they belong together (Gorman et al. 2012: 160,172). This will allow for the project leader an opportunity to develop individual practitioners while enhancing their individual capacities. The loyalty that the manager needs from the members is more to do with the manager's type of power and relevance to the tasks to be performed (Lin, Mainemelis & Kark, 2016: 537,556). To do this, it is critical that the project leader has primary team leader skills to enable the development of an effective team that will succeed (Gehring, 2017:50). Teams are an indispensable part of project execution and it is the project manager's responsibility to build a successful and performing team. Development of a team is critical for the success of the project, a poorly developed team is likely to perform poorly and result in another failed project (Herrmann & Felfe, 2014: 209,227). The development of a team should always be thought of in two ways, the task to be performed for which hard skills are needed, and the performance and

coming together to work for which soft skills are indispensable considering that all the work is planned by people, for people and executed by people.

**Table 3.3 Team development process**

<b>Forming</b>	<b>Planning</b>
<p>Kick-off meeting to get acquainted with one another / Relationship development</p> <p>Understanding of the project boundaries</p> <p>Project manager needs to provide direction and clarity toward the team</p>	<p>Agreement on scope and creation of scope statement</p> <p>Quantify project activities</p> <p>Document project deliverables</p> <p>A work breakdown structure</p> <p>Project plan:</p> <ul style="list-style-type: none"> <li>• Plan resources</li> <li>• Staff acquisition</li> <li>• Time baseline</li> <li>• Cost baseline</li> <li>• Quality standards</li> <li>• Communication lines</li> <li>• Risk responses</li> <li>• Procurement processes</li> </ul>
<p><b>Norming</b></p> <p>Creation of cohesion and unity</p> <p>Different project members will play different roles</p> <p>Team member commitment</p> <p>Project manager needs to make sure that s/he provides supportive</p> <p>Feedback and that s/he fosters commitment to the project vision</p> <p><b>Storming</b></p> <p>Disagreements</p> <p>Counter dependencies</p> <p>Managing conflicts</p> <p>Overcome groupthink</p> <p>Violations of team norms and unmet expectations</p> <p>Focus on process improvement</p>	<p><b>Control</b></p> <p>Scope creep</p> <p>Time baseline performance</p> <p>Cost baseline performance</p> <p>Cost baseline performance</p> <p>Quality control</p> <p>Communication checks</p>

**Source: (Gehring, 2017:50)**

The table 3.3 above details the occurrences at the different stages of the project team development phases from forming, norming, planning and controlling which is during implementation. According to Alexander, Penley and Jernigan (2014:57) the team development procedure can be utilized by a project manager to ensure that the team

performs successfully. Successful execution, as alluded to in earlier chapters is determined by the ability of the team to comply with the triple constraints of the project.

### **3.2.5 Team cognition and team effectiveness**

Delegach, et al. (2017: 724,740) defines team cognition as the attainment of a state or stage during which team members have developed a system or pattern of understanding what knowledge should be distributed among the team members. This may be based on the individual cognition (compositional) being similar to or at the same level with that of the team cognition (Epitropaki, et al. 2017: 104,129), or as a result of a greater degree of synergy among team members which results in a new level of a “new-team level construct.” Higher levels of compilation compilational emergence are considered better and more closely related to team process and performance. Choi, Anderson and Veillette (2009: 330,357) opines that teams develop trans active memory systems and mental models as team members develop similar cognitive understanding of their goals, objectives, and circumstances. The team members appear to be able to retrieve and understand messages in the same way as individuals and depend on knowledge acquired from other members. The levels of team cognition impacts on team behavioural process, which in turn will affect motivational states and thereby impacting on the levels of effectiveness (Hamstra, et al. 2011: 182,186). At this level the team has task related models (duties and operational matters) and team related models (interdependence of team members). These if properly balanced determined the effectiveness of the team.

Research has also focused on the causal factors for high performing teams and poor performing teams to measure the effectiveness of teams. McFadzean (2002: 537,551) postulated that the sheer presence of different effective-team-models can be explained through acknowledging the differences of the people, tasks and expertise that comprise a team. In the team will be different personality types and traits, the size of the group, the work norms, how the members relate to each other, structure of the team and the competency of the leader (Fulmer & Gelfand, 2012: 1167,1230).

Dorfman et al. (2012: 504,518) posits that teams are formed to perform tasks that are complex that cannot be performed by an individual or single skill, different skills are needed for the task. To formation of a team to perform these complex tasks is not a



given that success will be achieved, teams have to perform to a certain standard to achieve the objectives (Van Dierendonck, 2011). A few things need to be in place, the plan should be achievable, the time, cost, quality should be real, the political climate conducive and there is need for effective leadership. Proper implementation of the plan is therefore key to the success of a project hence the PMBOK knowledge areas which should be in the competency kit of every project leader (Beechler & Javidan, 2007: 131,169). Evidently there is need for adequate training of both the project leader and the project team members in their respective tasks they will perform. The project leader may need both hard skills competencies in the discipline and soft skills competencies to manage team members effectively for the project to succeed. Aga, Noorderhaven and Vallejo (2016: 806,818) suggests that effective project leaders should have a comprehensive understanding of the discipline, the human relations competency and the ability to plan for both time schedules, task schedules and resource scheduling. Teamwork is unavoidably interpersonally demanding as it is cognitively critical to have the right type of members for all practical purposes. Kozlowski and Ilgen (2006: 77,124) demonstrated that talent is not enough for effective team membership, but that adequate training of individuals is a necessity. The training should focus on making team members learn to coordinate roles and responsibilities with those of other team members (Rolfe, Segal and Cicmil, 2017: 739,748). Functional interpersonal interaction skills are necessary to build a cohesive project team with high levels of synergy, motivation and interdependence. Support from the organisation, especially senior management and the rest of the stakeholders only adds on the prospects to succeed. Tyssen, Wald and Spieth (2014: 365,375) suggests that groups develop into team through 4 stages, namely; dependency and inclusion, counter dependency and fighting, trust and structure and then work.

- **Dependency and inclusion;** the team members get to know each other as they start on the processes leading to team formation. As they know each other better, levels of dependency are likely to grow and they start including each other in the group. But the personality traits take long to change as they are internal and more like life habits.
- **Counter dependency and fighting;** the general resistance to change immediately and possible resentment when personalities clash may lead to some form of fighting as each tries to establish their own position in this new relationship. This

becomes group for possible dysfunctional conflicts, but with effective leadership they eventually tolerate each other.

- **Trust and structure;** eventually they find their roles and withdraw to their niches as they realise their place in the group and the interdependency if the objectives are to be met. By now the vision and objectives are likely to be clear and the focus on the purpose of coming together becomes clear.
- **And then work;** then the work begins and they complement each other's weaknesses, learn each other's strengths and realise the new knowledge embedded in their team mates. The desire to cooperate may be increased as the project starts to take shape with milestone after milestone getting completed.

Organised and matured teams have self-autonomy to a degree, Marshak, Grant and Floris (2015: 77,100) constructed a hierarchical model demonstrating the four levels of team self-management. This runs on a continuum going the stages, a manager-led team, self-managing teams, self-designing teams and finally the self-governing teams. Gauthier and Ika (2012: 5,23) opines that self-controlled teams have charge over task execution, monitoring and controlling, responsibility over work processes, and responsibility over team design and performance. They are able to decide on the direction of the whole operations working towards attainment of the prescribed objectives with intentions of succeeding (Davies et al. 2017: 73,78). Team performance is team effort based on individual results culminating in collective results with the final product being greater than the sum of individual effort.

Barber (2013: 964,977) surmised that the team interdependence helps in covering up for the weaknesses of individual members thereby building trust among team members. Even though there is need for interdependency, increased dependence by individual members may be recipe for conflict if it may be perceived that the other members are not pulling their weight (McCann & Galbraith, 2011: 245,261). The expectation is that everyone contributes their fair share of the tasks and has knowledge well enough for the performance of the tasks they have been assigned to perform. Team members are prepared to come in and support where the member has weaknesses, but they may not be willing to do all the work themselves (Mathieu, Maynard, Rapp & Gilson, 2015: 73,90).

### 3.3 COMPETENCIES FOR TEAM LEADERSHIP

Extracting from the work covered on required competencies, and considering the contingency of leadership, there is a need for leadership that is purpose-fit. The ability for a leader to be effective depends on how the leader adjusts to the people (team members), the tasks to be performed and the environment (Gruden & Stare, 2018: 98,109). In the same way the development and leadership of a team requires situational leadership since effective leadership is a function of the circumstances. The most critical stages is when the group comes together before they eventually become a team, directional and or coaching leadership may be ideal (Hall, Grant & Raelin, 2015:23,33). At this stage the team members are style trying to identify and define their role and responsibilities and to understand the objectives to be achieved. Too often they may know little about the project leader and are therefore somewhat reluctant to come out and be vocal on the onset except for extroverts (Kapsali, 2011: 609,617). Coaching and motivating the team becomes a requirement, and the project leader needs to have this competency to succeed from the onset. The successful development of the team starts at the initial stages when the people meet, considering that first impressions last.

#### 3.3.1 Team performance

The performance of a team is tied to many other factors, too numerous to state here, but there are basics that are needful and identifiable. The most critical is the need for a project leader with the appropriate competencies for the type of team and tasks to be performed (Steinfort & Walker, 2011:225). Too often the human factor is trivialised and overshadowed by the need or the presence of technical skills. Technical skills are a means to an end, but the process to an end involves human relationships which determine whether or not the technical skills will be applied. Some of the elements of an effective team may be listed as illustrated in the table 3.4 below.

**Table 3.4 Elements characteristic of effective teams**

Team Goals	Team Priorities
Team Roles	Team Structure
Team Formality	Team Communication Channels
Team Flexibility	Team Cohesion
Team Skill Levels	Team Trust
Team Conflicts	Member interdependence

### **Source: Own construction**

There is a goal or purpose for the formation of every project team, and a good competent manager will start by trying to put the team together. So the team goals should be explained to all team members including the priorities and the vision for the project (Alvarenga et al. 2019: 277,292). It will be equally in order to introduce the team members and indicate their profession and roles they will be playing, in a sense they need to know the team structure. There will always be some rules and regulations, which it may be best if they are discussed up front and team members should be given opportunity for inputs (Zuo, Zhao & Gao, 2018: 425,442). The team communication channels and plan will be a critical tool for effectively moving information around and within the new group going forward. Communication is the glue that keeps the whole organisation integrated and working towards the same objectives with the correct and timely information (Thi and Swierczek, 2010: 567,589).

Good communication appropriately distributed may enable enhanced team cohesion and help in reducing team conflicts which too often are a result of wrong information or perceptions. Bono, Hopper and Yoon (2012: 132,145) opines that if conflicts are eliminated, then the likelihood of team-trust increases and interdependence becomes team- culture resulting in high team performance. The greatest need is a highly multi-competent leader that can sell the vision and have the influence to direct the team to meet its objectives. Though plans, tools and techniques may assist in bringing success to the project, it is people who use these tools and techniques. Jowah and Laphi (2015:15,39) are of the view that there are distinguishable characteristics of effective teams, namely;

- (a) clear understanding and passion for the project and its objectives
- (b) clear responsibilities and expectations from each team member
- (c) presence of the effort and desire to produce deliverables at the end
- (d) good inter-team relationships based on trust and support of each other

When these characteristics are found in a team, they are generally followed by team cohesion with all team members looking to the same direction. Cohesion is the bonding of the team resulting in the team working as one (Brake, 2005: 116,121) and sharing the destiny of the project. With them the sharing and interdependence together

with the lessons and strengths derived from each other motivate them. This is not because they do not have personality differences and difference in preferences, but they work together well because;

- they understand clearly the deliverables,
- there is clear delegation of responsibilities
- they feel well supported within and without
- they have respect for each other's views
- they have learnt to tolerate their differences
- they are helped by team building exercises
- they feel equal treatment and rewarding All these can only be the result of a project leader who is visionary, caring, and who values the contribution of his team members and makes them feel valued.

### **3.3.2 The team trust and performance**

Possibly a coaching project leader who knows the impact of human relations to team cohesion and performance. The project leader of this calibre focuses on team trust (Baiden and Price, 2011: 129,136) as the builder of the confidence that team members. This environment created by good leadership will also flow on to trust of the leader by team members. Numerous project leaders have failed to create the environment ideal for effective participation of team members (Scott-Young & Samson, 2008: 749,766). The common causes of such failure to create a cohesive project team are because of mistrust, which itself is an indication of an incompetent and rejected team leader. Jowah (2013:708,719) posits that followership should be understood as a product of congruency between the leader and the team members. The factors responsible for mistrust would generally be, namely;

- bad communication by the project manager
- signs of preferential treatment and ignoring others
- lack of openness in dealing with team members
- perceived inconsideration of team member feelings
- unwillingness to listen to the views of team members
- use of transactional or autocratic leadership styles
- treating of team members as of little value or worth
- unresolved cultural, racial or political differences

### 3.3.3 Team conflicts and performance

Too often the presence of mistrust lends itself on conflicts resulting from disgruntlement (Chow, Cheung & Chan, 2012: 927,937). This may end up impacting on other matters unrelated and causing more division where there had been no cohesion in the first place. Too often conflicts start is disagreements or merely personality clashes that are nursed and not resolved (Mok, Shen & Yang, 2017: 463,478). These grow into conflicts which if not managed properly may eventually become dysfunctional and impact negatively on project processes. Conflicts by their nature are disruptive, a good manager needs to attend to them at the level of disagreements before the relationship turns ugly. According to Hsu, Chang, Klein and Jiang (2011:1,12) some of the causes of these conflicts are, namely;

- Personality clashes between individual members
- Jealous as team members jostle for control of the team
- Conflict within the individual in response to demands from society
- Stereo typing of fellow team members
- Cultural, political, racial or value differences
- poor communication laterally and vertically
- inter-group jealous and competition for power
- inter-personal or personality clashes on issues
- too many rules practised sometimes not equally applied

Though the word conflict generally comes with a negative impression always when it is stated, research has identified some positive effects of conflict (Lee, Park & Lee, 2015: 797,807). By all standards it would be ideal that there should not be any conflict in any structure where people live or work together, but it is in the nature of humanity to always have differences. Savelsbergh, Poell and Van der Heijden (2015: 406,418) opines that there is nothing wrong about differences, but the problem is more to do with the cause of the differences and how that is managed. The table 3.5 below explains some of the negative and positive sides of conflicts.

**Table 3.5 Negative and positive effects of conflict**

<b>Negative effects</b>	<b>Positive effects</b>
They turn costly if people stop working to solve the conflicts	They allow for creativity as members think of solutions to the problems
Managers spend work time trying to solve preventable problems	Allow for a detailed look at aspects that might have been taken for granted
May cause irreparable damage to members' relationships	They force personal behavioural changes if members realise the negative effects
May result in a high turnover including key personnel difficult to replace	They allow management to restructure and gain more control to avert conflicts
May force structural changes and personnel roles to avoid conflicts	May show management errors that need to be corrected and things taken for granted
May reduce levels of team-trust and isolate members who need to work together	May bring stronger bonds in teams to fight the sources and future conflicts
May reduce levels of team cohesion and increase demotivation	Enables members to appreciate their differences and increase tolerance

**Source: own construction**

The management and indeed project team and sub-team members do not have to have a conflict to start avoiding conflicts (Grinchenko, Ponomarev & Lobach, 2018: 77,83). A pro-active project leader and any practitioner with experience may know from experience possible sources of conflict. Using the lessons learnt handbook the management needs to treat conflict as a risk factor, which indeed it is, and mitigate the risk (Kosenko, Kadykova & Artiukh, 2017: 53,57). Interpersonal relationships should be through regular training amongst the practitioners in order to boost their motivation and increase team cohesion. Chegini (2010:127,129) reckons that team building exercises are equally helpful and do not only wait to be done to reduce conflict, they should be used to avert conflict. There should be a deliberate effort to build and maintain team relationships and a conducive climate as a competency on human relations (Ojo, 2009: 388,397). A convenient and ideal working climate will enable the team to function effectively, and discourage discordant behaviour by any other team members. According to Khan, Jam and Ramay (2010: 292,298) if the practitioners experience a “warm” organisational conflict, this builds trust, allows for focus on

objectives and their relationship with one another improves. It is important that the team be made into one solid cohesive (bonded) unit that is so closely integrated. What is needed is effective leadership that can build the culture ideal for effective teams to survive. Below in table 3.6 is the nature of people who work together in a cohesive team

**Table 3.6 Effects of effective cohesion in a project team**

<ul style="list-style-type: none"> <li>• focused on achieving objectives</li> </ul>	<ul style="list-style-type: none"> <li>• trust each other's intentions</li> </ul>
<ul style="list-style-type: none"> <li>• depend on each other</li> </ul>	<ul style="list-style-type: none"> <li>• consult each other for synergy</li> </ul>
assist each other - cover weaknesses	<ul style="list-style-type: none"> <li>• support one another - complementing</li> </ul>
<ul style="list-style-type: none"> <li>• respect each other's views</li> </ul>	<ul style="list-style-type: none"> <li>• tolerate their differences, and</li> </ul>
accommodate others' preferences	<ul style="list-style-type: none"> <li>• look beyond culture and race</li> </ul>

**Source: own construction**

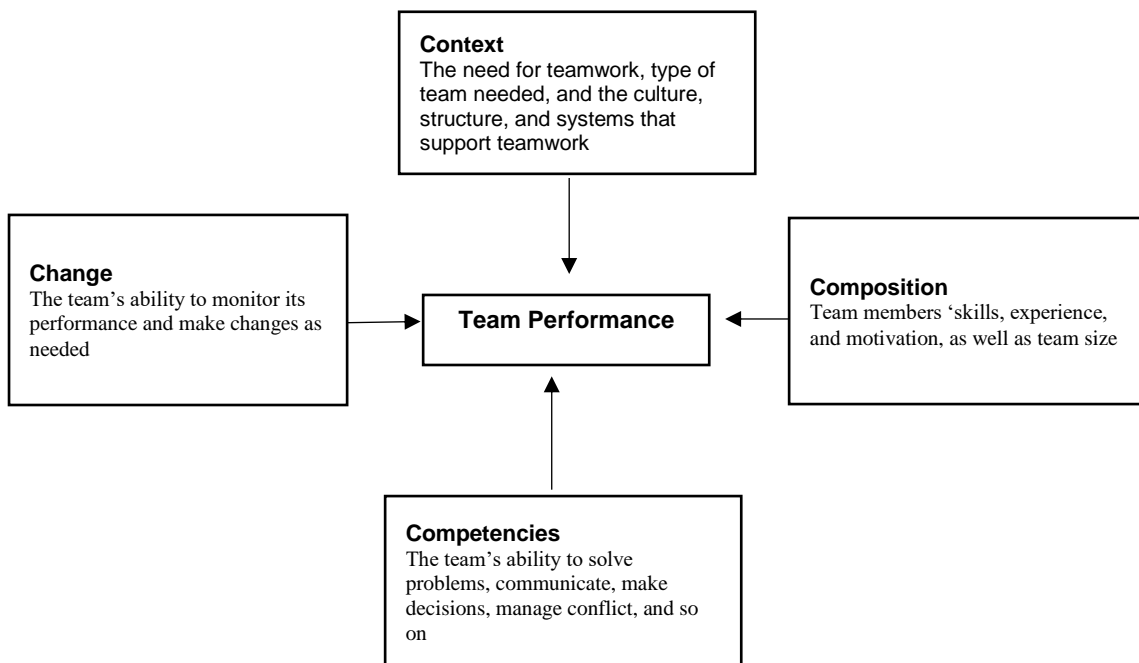
The total quality management movement emphasized by Deming (1995:183,186) focused on continuous process improvement achieved via quality management, quality circles and empowered employees. Teams are an outgrowth of the quality management process, and go beyond the quality circles and empowerment trends that achieved popularity in the 1980s (Dess & Miller, 2013: 180, 199). When used effectively and provided with proper training (Tannenbaum 2011:1,3), teams could lead to increased production, morale, creativity and innovation (Bouncken & Winkler, 2010: 133,151). Team performance has been addressed in the team literature as a generalized framework that includes inputs (i.e. resources), processes i.e. collective effort and outcomes i.e. specific performance indicators (Brem & Voigt, 2009: 351,367).

### **3.3.4 Determinants of High-Performing Teams:**

The focus on project teams has increased in both industry and academic circles as management-by-projects continues to increase in the business environment. Specifically considered to be ideal for preserving resources and maximising the scarce resources (Arranz & De Arroyabe, 2011: 485,497) management-by-projects will continue. Meanwhile, the most effective way of running a project is by the use of the team because of the complementary nature of the project team members (Dayan & Di Benedetto, 2009: 129,55). The study of teams and their effectiveness will continue,



and there is no one-size-fits-all situation and there are numerous models of team building. Primarily because every team is different just as each project is unique (Grille, Schulte & Kauffeld, 2015: 324,339). Different people, different tasks, different deliverables, different management and different political environment, so the list goes on. In view of all these, Hoch, Pearce & Welzel (2010: 105,116) identified 4 generic features for the team referred to herein as the Four Cs of which are determinants of high performing teams. These factors should be well understood and managed for teams to achieve superior performance. These generic factors of superior teams are, namely; context for the team, composition of the team, competencies of the team and change management skills of the team. The details are illustrated in figure 3.2 below



**Figure 3.2 The Four Cs of Team Performance**

**Source:** Price and Weiss (2011: 49–64).

Whilst it is important to emphasise that the effectiveness of a project leader is also dependent on the kind of followership, it is important to highlight that the project leader competencies are indispensable. For all practical purposes the project leader has a critical role to play in determining the Four Cs as illustrated above (Price & Weiss, 2011: 49,4). The leader has to create the context and the climate necessary for effectively executing the project by making available the culture ideal for that. There should also be a focus on the competencies of the team members and continued training in all aspects of the team tasks and human relationship key to team cognition.

### 3.4 COACHING AND MOTIVATING

As alluded to in numerous instances, the strength of the team depends on how the team is constituted from the beginning, and the effort put by team management. At this stage the team members do not know each other (most probably), they are not clear about the objectives (at least most of them), and are depended on the direction from the project leader (Radel, Pjevac, Davranche & Gruet 2016:32). In such circumstances then coaching becomes the only most appropriate way of getting everyone into the same path and vision (Lines and Evans, 2020:116) According to McCarthy and Milner (2012: 768,779) coaching is a critical must have competency for project managers, specifically at the beginning of the project execution process. This is intended to help the team to identify the weaknesses, know their strengths and build their operational strategy and structure as determined by their circumstances. Khan et al, (2012: 450, 475) assert that coaching slowly removes the too many responsibilities that the project leader has at the beginning, and allows for a high degree of team autonomy as the processes progress. According to Anderson (2016:93) the project manager is most probably the most informed about the project and the environs, and this information has to be disseminated to the rest of the team members. Table 3.6 below illustrates the mix.

**Table 3.7 The Coach Matrix**

<b>TECHNICAL SKILLS</b>	High technical skills/low relationship skills	High technical skills/high relationship skills
	Low technical skills/low relationship skills	Low technical skills/high relationship skills
<b>RELATIONSHIP SKILLS</b>		

**Source: Briere, Proulx, Flores and Laporte, 2015:121**

Project team competencies are generally different from your general manager or operations requirements, specifically in technical projects. The tendency is that the people generally employed to be project leaders almost always without exception must

have technical qualifications. Yet the failure rate remains high (Wenson, 2010: 607,616), the coaching matrix above is an ideal example of the requirements for a project leader in an engineering discipline. The table or graph shows that the different combinations of would be project leaders and the levels of both technical and human relations.

- **High technical skills / low relationship skills;** technical skills are a necessity for all the leadership of a project as they would understand the technical processes (Vugt, Hogan & Kaiser, 2008: 182,196). But these may not have an impact on the behaviour of the people who perform the tasks, behind the technical expertise is a human being with feelings, problems, attitudes, and any such things.
- **Low technical skills / low relationship skills;** this may be the most unsatisfactory where the individual may not assist with technical problems (Arto & Dietrich, 2014:112) and still has low relationships. Such a manager would have a difficult time as the leader lacks any form of power (Strang, 2011: 73,90) to enable them to influence any behaviour towards meeting objectives.
- **Low technical skills / high relationship skills;** this individual may have to depend on delegation and consulting for all technical queries which would remove the expert power (Freeman & Perry, 2010: 189,202). High relationship skills may compensate for the weakness in technical (expert power) and may have to depend on soft skills to survive.
- **High technical skills / high relationship skills;** the most ideal project leader in that the individual has a full grasp of the tasks and their nature providing the leader with expert power (Hannafey & Vitulano, 2012: 599,603). Added advantage would be the ability to get support and reduce conflict in the team, apart from galvanising support from the people.

### 3.5 CHAPTER SUMMARY

The ideal project leader needs to have both technical and human competencies to be able to have the power to manage the project operations. The conditions during project execution are generally tense with specific completion times within certain budgets and quality. The ability of a project leader to have both competencies (technical and relations) and utilise them appropriately is an irreplaceable competency. There is a need that all technically qualified individuals in projects, regardless of level of

operation, need to have ongoing training on the importance of human skills. It will be an added bonus to have a project leader with such impeccable competency and being able to use these at appropriate times. Contingency leadership remains the most ideal approach to this quest for competent, multi-talented project leaders.

## **CHAPTER 4:**

### **RESEARCH DESIGN AND RESEARCH METHODOLOGY**

#### **4.1 INTRODUCTION**

The study was set out to understand and establish the competencies required of managers to effectively manage project teams. Much information has been shared on what team performance is and how it is measured and maintained as a panacea for the failing projects. As alluded to above the projects have specific expectations to be met if it is to be considered as successfully executed. The process of getting to that level of satisfaction was the focus of this study, following much of literature review on the project features and success factors. The research was therefore intended to answer the research questions emanating from the objectives that were derived from the problem statement. research is conducted for further investigating a research question and to help develop a theory from the findings. The findings of this research are recorded in the pages that follow.

#### **4.2 THE RESEARCH OBJECTIVE**

Research objective is what is expected to be accomplished in the research process put in clear terms and clearly defined. The general intentions of the research are thus stated as; primary and secondary objectives.

##### **4.2.1 Primary objective**

- Identify the competencies considered to be necessary for effectively motivating project teams to successfully execute projects in IT.

##### **4.2.2 Secondary objective**

Secondary objectives are merely an elaboration of the primary research objective, which is the expectation of the researcher from this research project. The secondary objectives in this study were outlined as indicated in bulleted format below.

- Identify the project leader competencies considered ideal by the project team members during IT project execution phases.
- Identify the common project leader behavioural patterns that may be considered retrogressive by the project practitioners.

- Identify what project practitioners consider to be motivating and allowing for the effective execution of these IT projects.

### **4.3 RESEARCH QUESTION**

A research question serves the purpose primarily of giving guidance to the literature to be reviewed and the study to be performed. In a sense the research question answers the problem statement and addresses the research objectives. In this survey, the main research question asked was

#### **4.3.1 Main Research Question**

What competencies are required for a project manager to enable a team to perform effectively?

To this, a set of sub-questions were asked to expand on the existing question with special reference to the competencies available in some literature. The sub questions are;

- What competencies are considered ideal during project execution phases?
- What competencies are generally expected of a project team manager?
- What competencies in the project decision making process are used by project team managers?
- What competencies are commonly used in the management of project teams?
- What role does communication play in the management of a project team?
- What is the role of hard and thinking skills play in effective team management?

#### **4.3.2 Research Sub-questions**

- What effective project leader competencies are commonly practiced during project execution at the IT sites?
- What decision making competencies are practiced by the project leader when making decisions during project execution?
- What project leader communication competencies are used commonly by the leader during project execution?

- What project leader technical competencies are practiced by leader during the project execution process?
- What project leader human relations competencies are practiced during project execution process?

Literature consistently makes reference to the need for project leader competencies as a panacea for the unprecedentedly high project execution failure rate. It is also clear according to the contingency theory that leader competencies play a positive and effective role if they are used appropriately (Koryak, Mole and Lockett, 2015: 89–105). There is no one style or competency fit-all practice as these are dependent on the tasks, the people managed and the environment.

#### **4.4 RESEARCH DESIGN**

Research design is the road map or the steps to be followed during the research, demanding answers to “what” should be done (Jowah, 2017:78). The researcher opted for the descriptive research design because it is simple and allows for simultaneous use of the two research methodologies which are questionnaire and observational research method. On the other hand, research methodology is about “how” the “what” will be executed at the different stages of the research design (Welman, Krugger and Mitchell, 2005:9). The researcher used both qualitative and quantitative research methodologies (mixed research methodology) because they complement each other in the helping with understanding the phenomenon understudy. These can be used simultaneously in the same research, and in this case this assisted in cutting down on time with all the advantages. This approach enabled the researcher to have a full understanding of the phenomenon (breadth and depth) which helped in the identification of the competencies. Therefore, with the use of a research tool (questionnaire) data was collected. The decision to carry out the research using these methods took into consideration both the type of data required and the population from whom data was to be collected.

##### **4.4.1 Types of Research Design**

There are numerous types of research designs from which the researcher could choose which are:

- **Causal-comparative research design:** is a research design that seeks to find relationships between independent and dependent variables after an action or event has already occurred (Steinfort & Walker, 2011:225). The researcher's goal is to determine whether the independent variable affected the outcome, or dependent variable, by comparing two or more groups of individuals (Baiden & Price, 2011: 136).
- **Correlational research design:** attempts to determine how related two or more variables are (Arranz & De Arroyabe, 2011: 497). This degree of relation is expressed as a correlation coefficient. the variables are positively related (Arranz et al, 2011: 497)
- **Explanatory research design:** is conducted in order to help us find the problem that was not studied before in depth (Macintosh, 2018: 131). it is not used to give us some conclusive evidence but help us in understanding the problem more efficiently.
- **Descriptive research design:** often involves collecting information through data review, surveys, interviews, or observation (Steinfort & Walker, 2011:225). This type of research best describes the way things are (Burke 2010: 265).
- **Exploratory:** is defined as a research used to investigate a problem which is not clearly defined. It is conducted to have a better understanding of the existing problem, but will not provide conclusive results. For such a research, a researcher starts with a general idea and uses this research as a medium to identify issues, that can be the focus for future research.

The researcher opted for a descriptive research design. The choice depended largely on factors that are listed below, these questions were used to decide.

- What was the research supposed to be used for?
- What were the key expectations from the research?
- Was this to be qualitative or quantitative research?
- Were we going to use secondary or primary research?
- What were the likely limitations that would be experienced?

The researcher chooses to use the descriptive research design, and this defined as a design that is interested in describing the situation. This design allowed and or enabled the researcher to gather, analyse and present the collected data in diagrammatic format. The research design assisted in ensuring that the evidence emanating from



the research addresses the research objectives and problem statement. Even though research designs vary in length and complexity, but the generic expectations from a standard research design were present in the design that was chosen.

#### 4.4.2 Generic Research Design Characteristics

The research design assists in identifying and or defining some important aspects of a scientific research, thus the design had complied with certain expectations (Diekmann, 2011:5) This design was structured so that it would address the problem statement (the study gap), and it spoke to the four characteristics below. These were considered critical for an objective research design as they distinguished this design from a subjective research designs, these are, namely;

- Neutrality
- Reliability
- Validity
- Generalisation

**Neutrality:** the objective approach allowed for inclusion of information agreeing and that not agreeing to allow for a balance off in the differences of opinions (Claybaugh, 2020:10). The more all sides are brought into the study the more likely that the design and the findings will be neutral.

**Reliability:** the design assisted in formulating of the research questions to guarantee that the research, if repeated over and over again will bring the same results (Claybaugh, 2020:10). a questionnaire was used for reliability, the questionnaire was given one person for three times and the answers were the same. Extensive literature review assisted in comparing different designs that would be more appropriate for the given study. Some statisticians were consulted for help and they assisted in the construction of the data collection instrument (Claybaugh, 2020:10)

**Validity:** from the research design, predictions were made on how the data collection instrument would fare (Claybaugh, 2020:10) This included measuring the instrument validity and measuring the validity of the research findings judging from the research design (Claybaugh, 2020:10) The fact that one respondent answered three

questionnaires and came with exact same answers to all the questions shows that the measuring method was valid.

#### 4.5 RESEARCH METHODOLOGY

The researcher opted for the descriptive research design because it is simple and allows for simultaneous use of the two research methodologies which are questionnaire and observational research method. On the other hand, research methodology is about “how” the “what” will be executed at the different stages of the research design (Welman, Krugger and Mitchell, 2005:9). The researcher used both qualitative and quantitative research methodologies (mixed research methodology) because they complement each other in the helping with understanding the phenomenon under study. These can be used simultaneously in the same research, and in this case this assisted in cutting down on time with all the advantages. This approach enabled the researcher to have a full understanding of the phenomenon (breadth and depth) which helped in the identification of the competencies. Therefore, with the use of a research tool (questionnaire) data was collected. The decision to carry out the research using these methods took into consideration both the type of data required and the population from whom data was to be collected. The differences between these methodologies are illustrated in table 4.1 below.

**Table 4.1 Differences between qualitative and quantitative research**

Quantitative [positivist approach]	Qualitative [anti-positivist]
1.Focus on observable behavior	1.Focus on laws of relationships
2.Focus on universal relationship laws	2.Focus on human experience
3.Focus on causes of phenomenon	3.Focus on experience of phenomena
4.Uses the natural science model	4.Uses the experiential model
5.Is aided by firm checks and balances	5.No firm checks and balances
6.emphasis measurement and analysis	6.emphasise investigating processes
7. have natural science built structures	7.have socially built nature of reality

8. emphasizes causal relationships and the variables	8. focuses on relationship of object to researcher
9. ideal for objective data with numbers	9. uses subjective data from opinions
10. uses rigidly structured methods	10. uses flexible exploratory methods
11. tries to understand from outside	11. tries to be involved with subjects
12. needs a static environment	12. work with non-static realities
13. uses of particularistic approach	13. uses holistic [wide data] approach
14. uses large samples	14. samples are small

**Source: Jowah, 2015:61**

The differences between these two research methodologies is vast as evidenced from the table 4.1 above, yet these are used in research. According to Wetekamp, (2011:900) there has been a noticeable increase in the acceptance of qualitative (generally subjective) by the proponents of the natural science methods, leading to the combined use of the two methodologies in the same research (used simultaneously) resulting in the new methodology referred to now as mixed research methodology. In this methodology, aspects of these two opposing approaches to research are used to carry out a survey using both research methodologies.

#### **4.5.1 Advantage of Mixed Research Methodology**

The researcher opted to use the mixed research methodology, equally informed by the choice of a descriptive research design. This design enabled simultaneous use of both methodologies, and provided breadth and depth in understanding phenomenon (Brannen, 2015:173). The advantages of using the mixed research methods are stated as, namely;

1. Provides strengths that offset the weaknesses of both quantitative and qualitative research (Muskat, Blackman & Muskat, 2012:13).
2. Provides a more complete and comprehensive understanding of the research problem than either quantitative or qualitative approaches alone (Muskat, Blackman & Muskat, 2012:13).

3. Provides an approach for developing better, more context specific instruments (Muskat, Blackman & Muskat, 2012:13).
4. Helps to explain findings or how causal processes work (Muskat, Blackman & Muskat, 2012:13).

For these reasons the researcher felt that the advantages outweighed the disadvantages considering the nature of the research. This also had a lot to do with the source of the data needed to make the conclusions, and was thought (judged) that the information needed and target population be taken into consideration.

#### **4.5.2 Target population**

Collis & Hussey (2009:62) stated that the target population refers to the entire group of individuals or objects that researchers are interested in. The population contains the fundamental elements that gives them a chance of being sampled to take part in the study (Churchill and Lacobucci, 2002:630). According to Sekaran (2003:265) a group of people, events or things that a researcher has some form of interest in researching is regarded a population of a study. In this research the target population was IT project practitioners working at this nationwide State Owned Enterprise with it's headquarters in Gauteng. Each one of the respondents needed to be a subordinate reporting to a supervisor or manager in IT projects.

#### **4.5.3 Sample frame**

Sample frame here is defined as the total number of people whose characteristics fit into the category of the people who qualify for the study (Welman, Krugger and Mitchell, 2005:9). The quantitative sample of the study consisted of 340 people in IT under the SOE in the Johannesburg area where the research took place.

#### **4.5.4 Sampling method**

Sampling is a process used by researchers to identify, select and separate a certain number of individuals or objects from which a survey of a study will be conducted (Jowah, 2011:83). Systematic random sampling was used for the purpose (Esfahani & Dougherty, 2014), the first respondent was picked randomly and thereafter every third (3rd) individual was picked for the research.

#### **4.5.5 Sample size**

In all 110 people were sampled for the research, which was just under one third of the sample frame. Yang, Huang and Wu (2011: 258,267) posits that the bigger the sample the better, but advocates that one tenth of a representative sample will suffice (be adequate) for generalisations if the sample has all the characteristics required for the study. This sample was considered large enough.

#### **4.6 DATA COLLECTION INSTRUMENT**

A research instrument (questionnaire) was constructed for the purposes of data collection for this research. The mixed research methodology that was used informed on the nature of the questionnaire to be used, thus the questionnaire was designed to fit that. The instrument is divided into three parts, namely; biography, Likert scale and open ended section for discussions.

**SECTION A** – Biography of the respondents, this was to help in the screening of the respondents to confirm if they conformed to the characteristics required for the population to be studied.

**SECTION B** – Likert scale, used to rank opinions, perceptions, beliefs, judgments and attitudes of the respondents. The scale was created for the respondents to rank their “feelings” on a scale of 1-5. The rankings were 1 = strongly disagree, 2 = disagree, 3 = neutral or indifferent, 4 = agree and 5 = strongly agree.

**SECTION C** – Open ended questions (qualitative); this section requested the respondents to state their opinions, experiences and thoughts about aspects of the research. This allowed for interaction with occasional questions to confirm and or verify the assertions. The document in all covered all that was expected by the researcher with the idea of getting from the respondents whatever it is that they knew about the competencies of the leaders.

##### **4.6.1 Data collection methods**

According to Dorsten and Hotchkiss (2005:30), data collection is a process of collecting information by humans or machines. A study should utilise a survey to collect quantitative (questionnaires) data because this method is a relatively quick, cheap, efficient and accurate means of accessing information pertaining to a population. To facilitate the process, the research had 4 research assistants trained to help with face to face collection of the data. This method was selected for a few

reasons, it would be the quickest method, it would increase the questionnaire return rates and the respondents were free to ask questions for clarity. All the questionnaires from the different sites were brought in within 6 days of the operation and were ready for the next stage of the research process.

#### **4.6.2 Data analysis**

The collected data was brought together (questionnaires) and they were cleaned, edited, coded and captured onto the Excel Spread Sheet (ESS). This was the most readily available, and was equally ideal for the purpose of the research study. Tables, graphs, histograms and charts were constructed, and these were used to compare the variables under study. Content analysis was opted for as the instrument ideal to analyse open ended questions.

#### **4.7 ETHICS**

Individuals have rights and the researcher made an effort to inform the participants of their rights in the research. Welman *et al* (2005:181) posit that there is need to show respect for the right of individuals as a universal principle, and honesty and respect by the investigator is important. The generic principles constantly invoked in ethical considerations are: no harm should be done on the interviewees, interviewees should participate freely without pressure, no unethical questions should be asked of the respondents, there will be no pressure put to a participant to answer certain questions participants are free to withdraw at any stage of the research without problems.

Research ethics addresses the question of what ethically relevant issues that are caused by researchers' intervention will be expected to impact the people they research (Flick, 2011:215). According to Dawson (2002:146), when a study is undertaken, many participants in the study are willing to disclose a lot of personal information, thus the researcher should ensure that the information disclosed to him is treated with confidentiality. The researcher has an obligation of making sure that all the participants' information is treated with highest confidentiality so as to preserve human dignity. During the collection of the data for the study, all respondents were asked not to write anything that would reveal their identity. This was done to meet the one of ethical requirements of research, as their confidentiality and anonymity were

guaranteed. All the respondents were informed of what the study is about and were not forced to participate in the study. They gave their consent to participate in the study voluntarily. Welman et al., (2005:181) stated that there are three stages that ethical consideration should be observed: when releasing results that were obtained in the study, when recruiting participants for the study, and during intervention and measurement procedure to which they are subjected. According to Flick (2011: 216) there are eight principles of research, and they are listed below:

- Have the ability to justify why it is necessary to do a research about their issue;
- Be able to explain what the aim of the research is, and what circumstances will the participants be subjected to;
- Should be able to explain in detail the methodological procedures in their projects;
- Able to estimate whether their research acts will have ethical relevant positive or negative consequences for the participants;
- Assess possible violations and damages arising from doing their project – and be able to do so before they start the project;
- Possible violations and damages identified should be assessed according to principle 5;
- Should not make statements that are false about the usefulness of their research;
- Current regulations of data protection should be respected;

Wellman et al., (2005:201) stated that more attention should be put on four ethical aspects of research, which are: informed consent; right of privacy; protection from harm; and involvement of the researcher.

#### **4.8 CHAPTER SUMMARY**

This chapter gave details of the design and methodology employed in this research study. The research was quantitative in nature. Regarding the design, details were shared of the research paradigms, background, questions, and objectives used to inform the study. On the side of the methodology, the researcher gave details of the research population and location, how they went about selecting the sample size and the respective respondents as well as the data collection methods and work done. Questionnaires facilitated the data collection for the study. The researcher also speaks

to the validity and reliability of the study. Issues of ethical consideration including confidentiality and voluntary participation were also discussed in this chapter. Lastly, the researcher then gave a highlight of how the data would be coded and analysed. This, together with the details of the findings of the research, will be discussed in detail in the next chapters.



## **CHAPTER 5;**

### **DATA ANALYSIS AND INTERPRETATION**

#### **5.1 INTRODUCTION**

The sole aim of this chapter is to discuss and analyse the data that was collected from all the respondents that participated in the study. The main objective of this study was to identify competencies that IT project managers must poses in order to ensure project team members perform high in projects. A questionnaire was used to collect data from the respondents. All the people participating in the study were made aware that they are not forced to take part in the study, and that their identities will not be disclosed. The researcher has an obligation of making sure that all the participants' information is treated with highest confidentiality so as to preserve human dignity. The researcher followed all the ethical guidelines when conducting the study.

#### **5.2 REPORTING THE RESULTS**

From the onset as this research project started all the information provided was an effort to come to the eventual collection of data. The preceding chapters involved among others the theoretical background from reviews and researches conducted by other researchers. This provided a rich base for the full comprehension of the study. Including the fourth chapter which clearly broke down the scientific approach used to prepare for the eventual collection of the data. The mixed research method was used as it was deemed most appropriate to provide both breadth and depth of the study project. The most critical element at this stage was the instrument used to collect the data, and this was constructed with guidance from a statistician. The research tool was constructed and tested on the field on a handful of qualified respondents (30) which helped to identify possible omissions. The instrument was reconstructed with the to the final stage which was used to collect the data required. The instrument was divided into three (3) parts or sections, namely; Section A – Biography, Section B – the Likert scale and Section C – Open Ended questions.

- **Section A** – focused on the biography and or the profile of the respondents, it was thought important that there be adequate information about the sources of the data that would come out of the exercise.

- **Section B** – the Likert scale which was purposely designed to measure non-quantifiable human aspects like feelings, beliefs, attitudes and perceptions which were measure on a scale with ranges plotted on 1-5.
- **Section C** – the open-ended questions, this was “open” even though there were specific guidelines as to what matter was to be responded to – the respondents spoke freely on other issues that they considered important to the study.

All the instruments were brought to one place, and the next process started, which was; data editing, cleaning, coding, capturing and analysis. The data was captured on to an Excel Spreadsheet, this was readily available and capable of performing the construction of the illustrations as required. The purpose of the illustrations is to make easy comparison of the relationships between the variables from which interpretations were to be made. Xia and Gong (2015:300-311) ddefine data analysis as process of inspecting, cleansing, transforming and modelling collected with the purpose of extracting useful information that will assist in the formulation of a conclusion to the study. This assists in making decisions scientific which may assist in findings solutions or providing understanding of phenomenon.

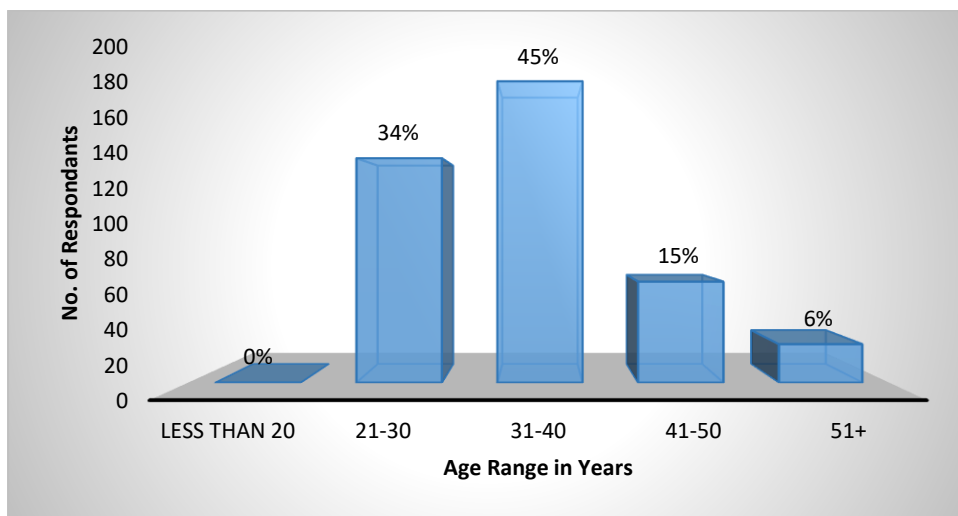
### **5.3 FINDINGS**

An instrument (the questionnaire) was used to collect data, and this instrument was divided into three (3) parts, namely; biography, Likert scale and the Open-ended section. The Biography was intended to identify and screen the respondents to the survey with intentions of increasing the validity of the data collected. The third section (Likert scale) was used to measure the perceptions, attitudes, and opinions on the subject from the participants. The last section is an open ended section which opened up discussion with the respondents with the intention of getting to understand underlying aspects that may not have been covered in the Likert scale. The open-ended section will be reported largely in the form of tables highlighting the respondents’ views on aspects of the study on competency. The reporting pattern in the chapter is a chronological question and answer format following the structure as provided for in the research instrument. A total of 500 questionnaires were distributed to project team members, project administrators, technicians and active practitioners in the selected organisations. Of these, during the cleaning and editing process 85 were discarded as spoilt, an analysis was made on the 415 questionnaires. The details below are the results from the 415 respondents.

### 5.3.1 Section A: Biography

**QUESTION 1; How old are you? Please indicate your age range in the boxes below by ticking the appropriate box below**

**RESPONSE;** This question sought to ascertain the age of the respondents, the understanding was that there may be a relationship of an individual and their understanding of what constitutes competency. To this question the participants responded as illustrated diagrammatically below in figure 5.1.



**Figure 5.1 The age of the respondents**

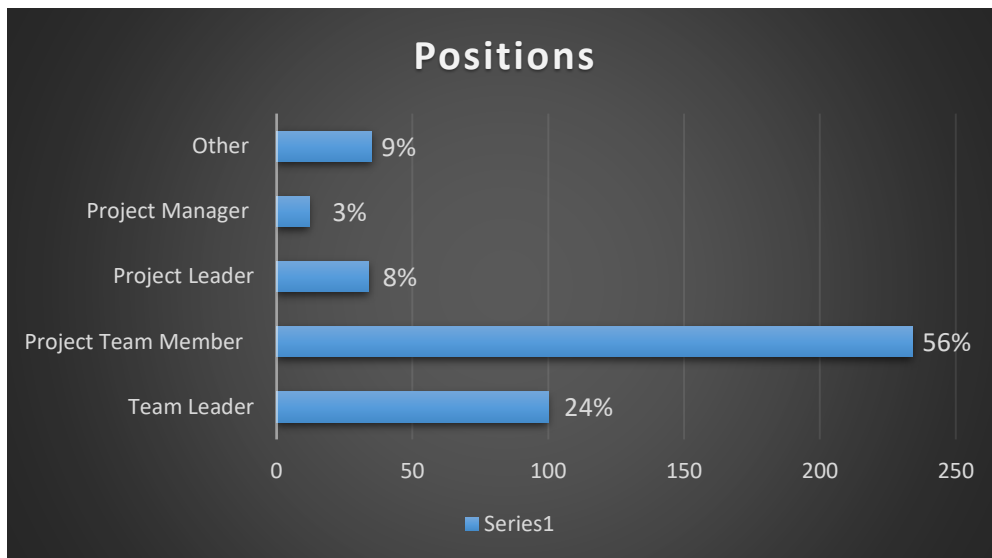
**Source: own construction**

As illustrated in figure 5.1 above, 45% of the respondents were in the range group 31-40 years of age. Generally, a group that would be married or may be living with family and may have acquired desired education for their lives. This group will have some number of years' exposure to different styles of project management and possibly decided on what they expect as competent leadership. This is followed by 34% who are in the age range 21-30, most of whom may have just started on a career and may still be deciding on their future career. These may have had some experience but may still need to interact more to understand what leadership competency is. The 41-50 group is ironically small at 15%, it is not immediately clear if these are the managers whose competency may be under scrutiny. It is hypothesized that at this level they have formed their minds solidly on what they think works or does not – competency.

The list of these are 6%, the 51 and above age group, working for their retirement, these may have much information, but may not care much at this level.

**QUESTION 2; What is your position in the organisation? Please state in the space below.**

**RESPONSE;** The expectation or assumption is that the position in the organisation assists in identifying the respondent's ability to provide the answer required. A manager in the system may not talk about what impact leadership has on them, rather what they perceive to be acceptable to the subordinate. On the other hand, the subordinate may be better placed to say how the leadership impacts on their own motivation and performance. The response is illustrated in figure 5.2 below.



**Figure 5.2 Position of respondents in the organisations where they work**

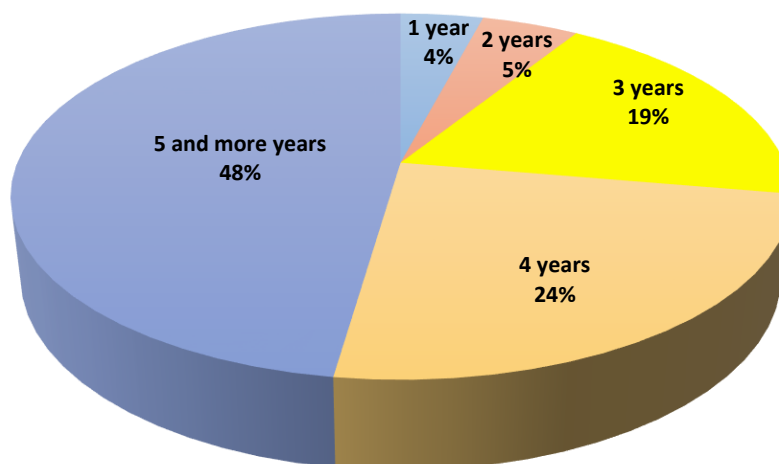
**Source: own construction**

As demonstrated in figure 5.2 above, 56% of the respondents were project team members, suggesting that they reported to someone else. Generally, a group of individuals who work together on a project to achieve its objectives is called a team because their work complements each other. These team members who may not directly involved with management but carry out the work related to the project, the have a team leader (for their tasks) who functions as their manager. This team consists of people from different teams with precise subject matter knowledge and with the required skill set to carry out the work of the project. The next is 24% who work as

team leaders, these provide direction, instructions and guidance to the teams that they leader under the guidance of the project leader / manager. They also provide training and communication needed by the project sub-teams for effective functioning and execution of tasks. They also report to their senior managers responsible for the group of tasks that are related and need to be coordinated. The next 9%, is largely the interns, “young professionals in training” who work in projects to gain experience and complete their studies. There is the 8% identified as project leaders, structurally these are they manage sub-team leaders and report to the project manager (overall) or the program manager – depending on the structure used. And 3% who work as project managers, mostly these may have been in senior positions working with big project and working as general and executive managers.

**QUESTION 3; How long have you been working, including your previous occupation?**

**RESPONSE;** Answer; everyone who participated in the survey responded to this statement. The researcher had in mind that the respondents have different years of experience in different settings, giving the much needed diversity in the assessment of the leadership styles understudy. An illustration of the data that was gathered is given below as figure 5.3



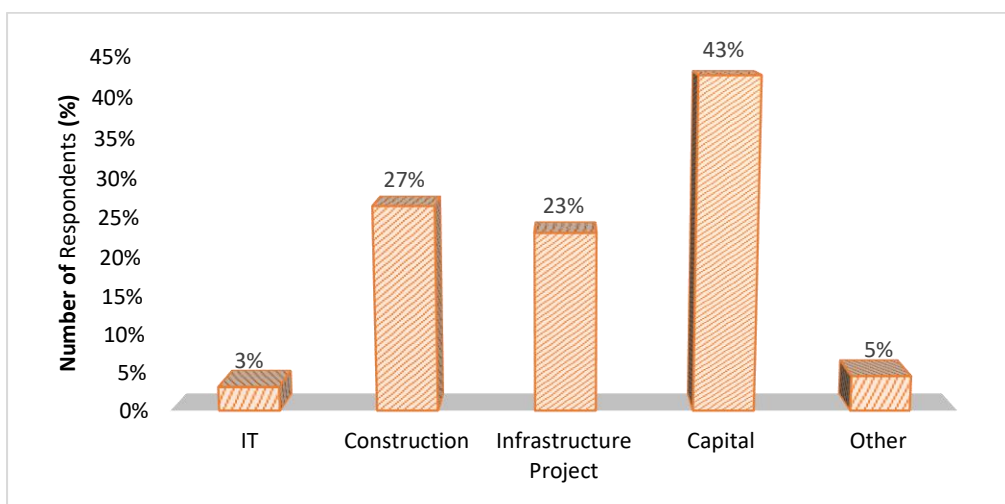
**Figure 5.3 Experience of the respondents**

**Source: own construction**

As illustrated above, 48% of the respondents were in the range group 5 years and more working in the same or a similar environment. Generally, a group that would be working on the same company for years including top management and old people who are close to retirement. This is followed by 24% who have 4 years of experience, most of whom are fairly new to the workplace and may not have come to the level of understanding aspects of management and being managed. The 3 years' group is small at 19%, this is the group that has mostly respondents who have just completed a young professional in training and now they work as permanent and also student who have degree and honors qualification who still and leaning the ground work. Followed by 5% for 2 years and 4% for 1 year, these had less experience and they still need to interact more to understand what leadership competency is and how teams work.

**QUESTION 5.4: What kind of project do you work in?**

**RESPONSE;** This statement was answered by all the respondents who participated. The researcher had in mind that different project team perform differently due to complexity and size of the project. Research findings have illustrated again and again that there is a relationship between the tasks to be performed and the type of leadership required for the same (Forsyth, 2010:253). Griffin and Rick (2010:135-136) came with the same conclusion in concurrence with earlier findings. The responses are illustrated below in figure 5.4.



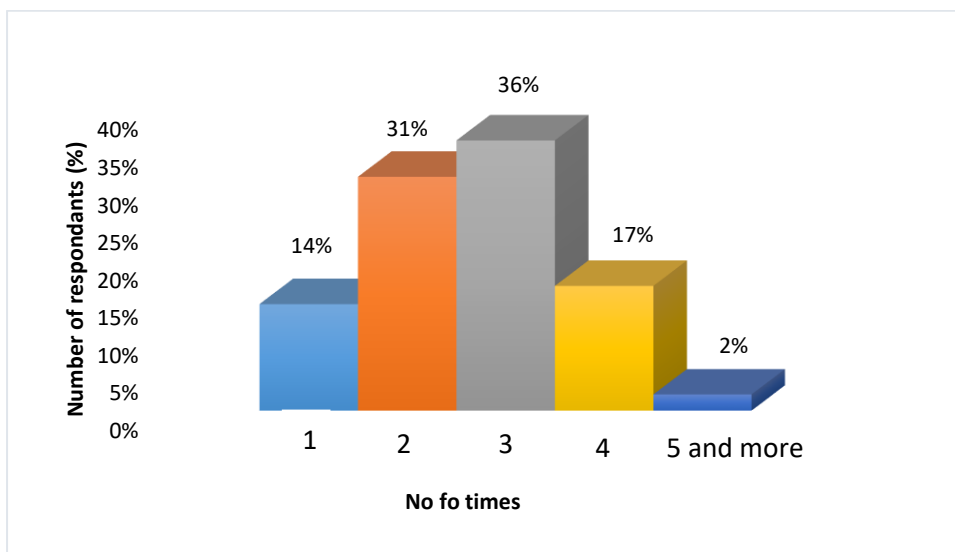
**Figure 5.4 type of a project where respondents work on**

**Source: own construction**

The respondents work in different types of projects, and as indicated in the illustration above, the highest respondents are those working in capital projects at 43%. This is followed by 27% respondents working in construction, these are aspects or sections of the same big project with different types of activities required to complete the full project. Construction projects are building infrastructure (railways, wagons and locomotives), followed by 23% of infrastructure projects, infrastructure projects are maintenance of infrastructure. There is only 5% of other projects which include, security and rail network related projects, security projects are cable installations and rail network projects are network related projects. Lastly, 3% of respondents work on IT project. IT projects are the projects that deals with communication for the whole firm including and or involving the coordination of all the sub-projects.

**QUESTION 5.5 How many times have you been promoted at any of the places you've worked?**

**RESPONSE;** this question wanted to determine an access given to team members to climb up the ladder or to get promotion to the next level. Figure 5.5 below depicts the times of promotion that the team members have at their work places.



**Figure 5.5 number of times a respondent have been promoted**

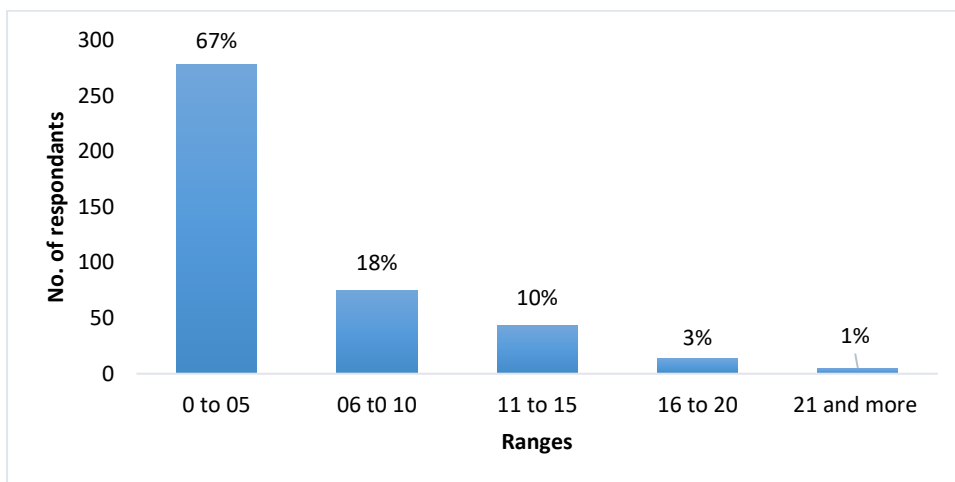
**Source: own construction**

Basing on the results of the findings as shown in figure 5.5, 36% of the respondents have been promoted 3 times working in the organization, 31% have been promoted 2 times and 14% have been promoted 1 time, means that 81% of the team members

find it difficult to escalate on the ladder to another level, considering that most of them started as interns, graduates and general workers. Only 19% of the respondents find it easier to escalate the ladder to the next level, those who have been promoted 4, 5 times and more. This also can be seen as a pushing factor towards the employability of graduates who might choose to be unemployed than working at a lower level for the rest of their work life.

**QUESTION 5.6 How many people report to you?**

**RESPONSE;** All the participants (100%) took part in answering this question, this allowed us to identify the extent to which people report and the relevance of the respondents to the research. It was assumed that all respondents might need to support employees reporting directly from them at work which will complicate their performance as well. The results obtained are given below in figure 5.6.



**Figure 5.6 number of people directly reporting and being reported to**

**Source: own construction**

As illustrated in figure 5.6 above, 67% of the respondents were in the range group 0-5 people reporting to them. This is followed by 18% who have between 06-10 people reporting to them, ideally they also report to some manager or supervisor. Only 10% of the respondents had between 11-15 people reporting to them followed by 3% of the respondents had 16-20 people under them and only 1% had 21 people or more reporting to them. Every one of the respondents reported to someone and had some of them having subordinates and supervisor / supervisors. As long as the respondent



reported to someone, it therefore means they would inevitably interact with the leader whilst they have people under / below them who also report to them.

### 5.3.2 Section B: Likert Scale

A **Likert scale** is a psychometric scale used in research that employs questionnaires to *rate (rank) on a scale*, although there are other types of rating scales. The scale requests for the level of agreement or disagreement by the respondents on a symmetric agree-disagree scale in response to specific statements. The Likert scales are popularly used in the research in fields like business, marketing, psychology, social sciences and statistics. A Likert item as a simple statement measuring the perception, feeling, attitude or belief is therefore gives the statement a quantitative value. Regardless of the subject of any form, objective or subjective dimension using the levels of agreement/disagreement to exhibit "symmetry" and "balance". The typical format of this Likert scale used here is based on the illustration below;

1. Strongly disagree = 1
2. Disagree = 2
3. Neutral or ambivalent = 3
4. Agree = 4
5. Strongly agree = 5

An effective Likert scale includes a series of statements to be ranked on a pre-determined scale on the basis of the strength of the feeling about the statement. These are illustrated statement by statement chronologically as they appear in the questionnaire. These statements are based on literature reviewed, and thus they are measured on the scale in an effort to understand their value amongst the followers.

**STATEMENT 1; Team manager communicates the scope of the project regularly**

**RESPONSE;** Communication is identified by the PMBOK as one of the key 9 project management knowledge areas. The research sought to identify the extent to which the respondents consider communication as a critical measure (expectation) from them as a sign of competency in project execution. The level of understanding of these knowledge areas also impacts on the expected behavior of both leader and followers in the project execution processes. In most project organisation there is clearly structure communication plan for the project execution process, clearly structured and

communicated to all project practitioners. The responses are illustrated below in the figure 5.7.

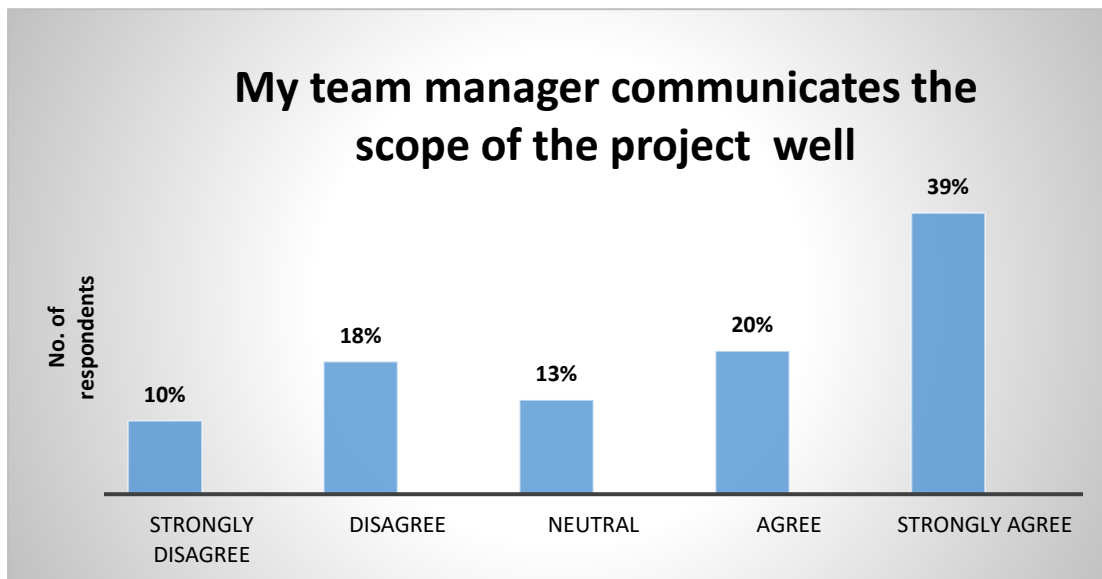


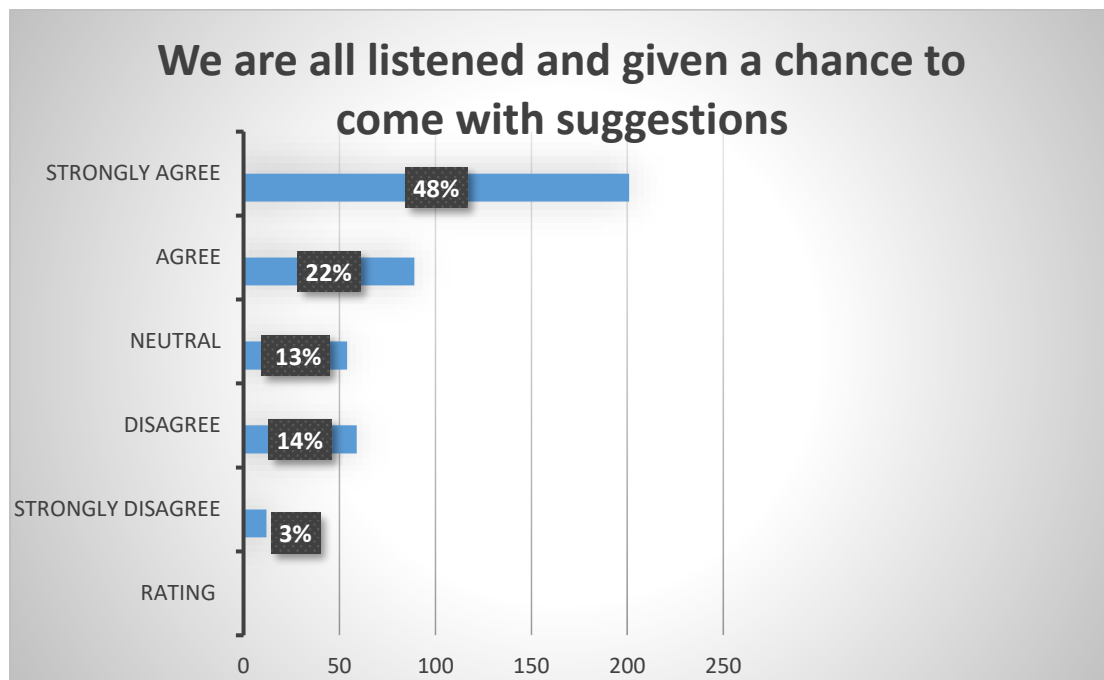
Figure 5.7 Respondents perception about project scope communication

**Source: own construction**

Cohen, Rozenes & Ben-Gal, (2016:22) postulated completing a project successfully requires good communication among team members they also added that for a project manager to successfully manage the team, project scope need to be communicated very well. The respondents agreeing (20%) and those strongly agreeing (39%) total 59%, suggesting that the majority of the respondents agree with the statement. The neutralis at 13% of the total with those disagreeing at 28% total (10% of them strongly disagreed and 18% disagreed). It can be generalized that the team managers (in general) communicate to their subordinates. It is however critical to accept that the balance of 41% (neutral and disagreeing) may mean the difference between successful and unsuccessful execution of project implementation process. Poor communication is a risk factor that needs to be looked out for early in the beginning of the project execution processes. Communication is a critical competency for effective execution of all undertakings where people are involved and coordination is necessary.

**STATEMENT 2: We are all listened and given a chance to come with suggestions**  
**RESPONSE;** Every individual employee feels that they have something to contribute regardless of their level, they may feel too “junior or timid” but they will always have

an opinion, a feeling, another view, name it. Jowah and Beretu (2019: 264,273) posited that one of the signs of good management would be the ability to listen to subordinates as this makes them feel appreciated. If employees are listened to they get corrected (educated) where they may have had wrong ideas and perceptions. Effective project managers should be good listeners because much of their work requires receiving and sending information. The responses are illustrated below in the figure 5.8



**Figure 5.8: We are all listened and given a chance to come with suggestions**

**Source: own construction**

In figure 5.8, the responses show high percentages in strongly agree (48%) and agree (with 22%) which makes a total sum 70%. Clearly the respondents think that listening by the manager (or them being listened to by their managers) is a critical competency for effective managers. Compared to respondents who disagree, 14% and strongly disagree, 3% which sums up to 17% whilst neutral respondents have 13%. This allows for generalization, and is a good lesson for managers who want to be competent. Listening to is not the same as “necessarily doing what has been said,” the idea is that when people are listened to they get involved (Mohamad, Ramli, Hashim & Zakariah, 2015: 259,263). Adding on to that, it helps in the development of the much needed relationship between the leader-member which promotes both loyalty and motivation to perform.

### STATEMENT 3: The team contribute to the decisions made by manager

**RESPONSE;** The old adage goes “two heads are better than one” is what is on the test here, like the one above all participants feel valued if they contribute to decision making. It should be clear that decisions may not always please everyone who has participated or contributed information, but all that helps in the making of a more relevant decision – all things being constant. The numerous respondents aired their views and these are illustrated in the figure 5.9 below.

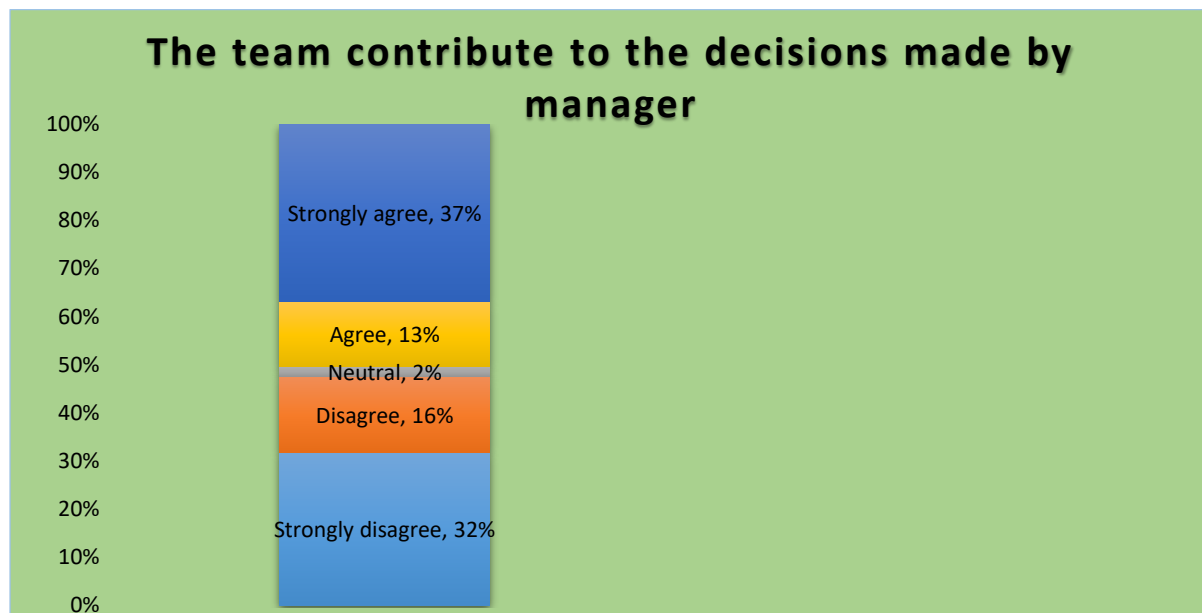


Figure 5.9: Team contribution to decisions made by manager

#### Source: own construction

According to (Meng, 2012:195) Actively engaging workers in the decision-making process increases overall company morale, also he emphasised that active employee involvement lowers that gap, opening the lines of communication between project managers and project team members. As a functioning participant in the decision-making process, employees understand their ideas are an important contribution to the company and gives them the power to influence the outcome of their work, leading to increased job satisfaction and a positive attitude, not only toward their position but also to the company itself (Packendorff, Crevani, & Lindgren, 2014:7). Considering the response to the previous statement, it was expected that this was a given then there will be overwhelming positive response. The idea of a team is that each one of the members complements the others in areas where they may not be that strong, disappointingly only 50% of the respondents (37% strongly agreeing and 13% agreeing) believe that the team contributes to the decision making process. The suggestion made here is that power is centralised in certain people, and the team may be functioning more as a formality.

Almost equal to those saying that the team make decisions together is the 16% disagreeing and the 32% strongly disagreeing making a total of 48%, only 2% less than those opposed to them. The 2% is recorded in the results as neutral, it is disappointing to look at the figures as they are, surely there is not team work in the making of decisions, this may become a breeding ground for project risks.

**STATEMENT 4: My team manager does not have a good relationship with stakeholders**

**RESPONSE;** Stakeholder management is placed amongst the 9 critical project management areas by PMBOK, understandably because stakeholders are all the people participating or involved in the project. There are internal and external stakeholders in a project, and each has a role and subsequently an impact on the effective execution of the project. They do not have the same interests, the same impact, but their management reduces the risk factors around project execution. Thus the respondents were asked to share their views in terms of the relationship between the team and the different stakeholders. The respondents' views are illustrated in figure 5.10 below.



**Figure 5.10: Relationship between Project managers and stakeholders**

**Source: own construction**

Muskat, Blackman & Muskat. (2012:12), highlighted some of the reasons for building a good relationship with stakeholders. The reasons are as follows: to help stakeholders understand the project manager's level of responsibility, to get to know stakeholders better, be mindful with communication during conflict resolution and be clear about project requirements up front. Every project, every initiative, will have

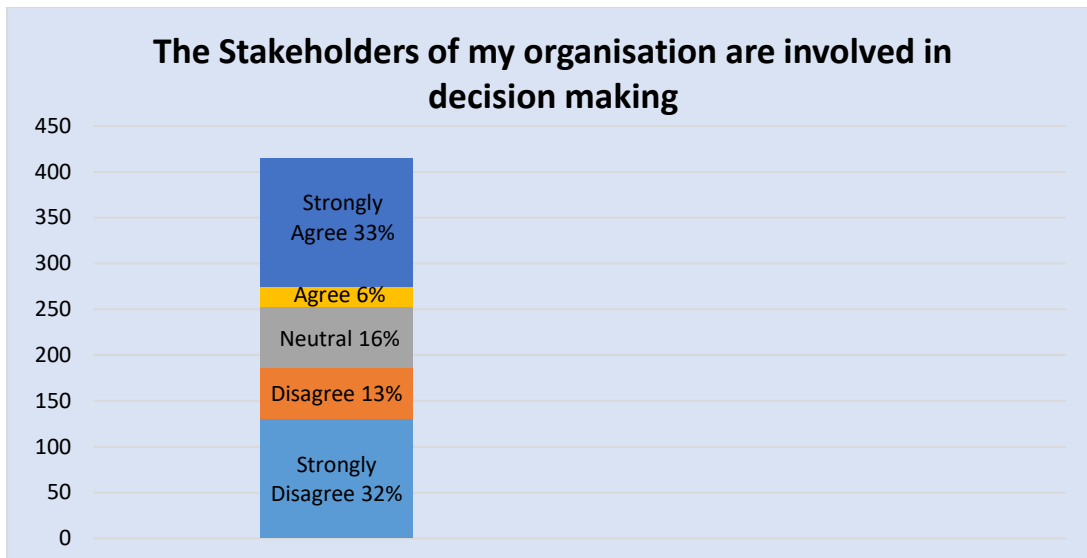
something occur that is not expected. When unexpected problems occur with a relationship, sponsors have a feeling of confidence towards project manager.

It was not stated specifically which stakeholders, and the answer would therefore be generalistic in that it does not point out to a specific type of stakeholder. However, a neutral value of 7% is recorded with 6% strongly agreeing and 9% agreeing that the manager does not have a good relationship with stakeholders. An impressive 76% of the respondents disagreed (32% disagreeing and 46% strongly disagreeing) thereby suggesting the different managers they work with actually have good stakeholder relations. This may also mean a good working relationship between the subordinates and their managers, supervisors, team leaders, whichever is most applicable.

This allows for a generalisation that there is generally good working relationship between the leaders, managers and or supervisors with all the stakeholders in and around the project execution processes. If these percentages were converted to the numbers of people it would be 194 (46%) respondents strongly disagree and 173 (32%) respondents disagree with the statement, this equals 367 people with that view.

**STATEMENT 5: The Stakeholders of my organisation are involved in decision making.**

**RESPONSE;** As stated above, stakeholders would mean every one with interest in the project, and admittedly different stakeholders get involved in the making of decisions at different levels depending on their roles in the project. The engineer in the project process will most probably be involved in decisions on technical processes and other operational issues. Whereas the municipality officials will be involved in decisions to do with health and safety, environmental issues and the customer will be concerned about the scope and delivery dates, etc. What the respondents said is in figure 5.11 below.



**Figure 5.11 Stakeholder involvement in decision making**

**Source: own construction**

According to Jawahar & MCLAughlin (2001:69), participation by project stakeholders means sharing a common understanding and involvement in the decision-making process of the project. Participation by project stakeholders has many benefits and advantages, among them are: Ensures that the project plans are a reflection of the real needs and priorities, Makes the project accountable to the stakeholders, Enables the voices of the stakeholders to be heard and by doing that the level of trust in the relationships increases, Promotes transparency in the actions of the project and ensures that the project is held accountable for its actions and Increases ownership by stakeholders who feel the project is taking in account their views and motivates them to sponsor the project, which ultimately leads to sustainability (Jawahar et al, 2001:69).

Another area of seeming disagreement between the respondents, interestingly neutrality is fairly low (16%) even when the respondents are torn apart. Those agreeing that the stakeholders are involved in the decision making are 39% in total with those agreeing at 6% and those strongly agreeing at 33%. Adding the neutral to this figure gives us 55% leaving us with a remainder of 45% who disagree (13%) and strongly disagree (32%). As stated above, there was no specification as to what stakeholders specifically were referred to, the likelihood is that the respondents might have been made reference to different stakeholders from each other.

## STATEMENT 6: My team manager maintains project objectivity

**RESPONSE;** The objective of a project is what the project is intended to achieve, generally this is put in the form of a statement to guide the practitioners in their operations. It is necessary to keep and maintain project objectivity because it enables the practitioners to identify and foresee possible risks which can then be mitigated. Most project leaders have the project objective written in the form of statement where it is continuously evaluated to measure operation compliance. The request from the respondents was along those lines – does the manager keep the project objectivity in view of the operatives. The answer is given in figure 5.12.

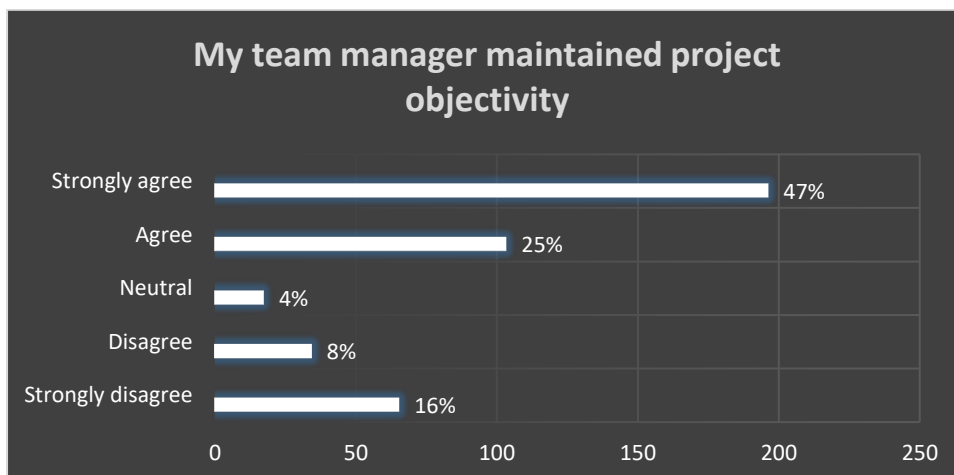


Figure 5.12: My team manager maintained project objectivity

Source: own construction

Kathleen, (2017: 169,179) identify and describe the concrete deliverables that will work together to achieve the goals of the project. To be effective, project manager should maintain project objectives to motivate the team, clearly outline a path to success and help monitor progress. Crawford, et al (2002:73,78) stipulated that project team members become passionate and determined in their work when they know what is expected of them. They get interested when they learn about the rewards for meeting and exceeding their objectives. Pillai, et al (2015: 485,497) postulated that If team members don't have the skills for their jobs, they are inspired to learn more and find ways to improve their performance.

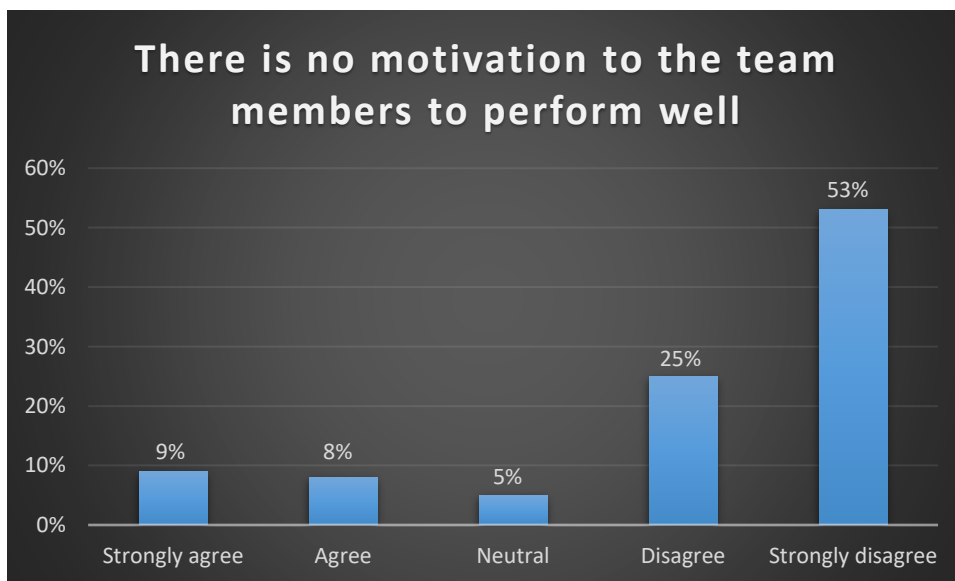
Neutral is low at 4% and yet those strongly agreeing at 47% and those agreeing are at 25% giving a total positive response of 72%. It can be comfortably generalised that the common practice for the managers is that they maintain project objectivity. The



remainder of the respondents a total of 34 (8%) disagree with the statement, that is 65 (16%) strongly disagree. It is acceptable that since the study involved different managers at different WBSs, it would be expected that they will not all manage in the same way.

**STATEMENT 7: There is no motivation to the team members to perform well**

**RESPONSE;** For centuries on end many studies have been conducted on motivation, how to motivate, the impact of the motivation, and many theories have been developed around this. What the researchers have come to agree in common is that a motivated workforce is productive and enables organisations to meet their goals. To reduce the failure rate of products it is equally important that there should be a highly motivated project team. Team motivation in project execution, given the characteristics of project teams, is therefore an indispensable competency for effective project execution. A motivated project team helps with meeting the triple constraints, which are used as determinants of effective execution of a project. Motivated employees can lead to increased productivity and allow an organisation to achieve higher levels of output. The opinions of the respondents are illustrated in figure 5:13 below.



**Figure 5.13: motivation to team to perform well**

**Source: own construction**

According to Morris (2012: 634,642) motivated employees results in high performance and customer satisfaction. Team members feel motivated when they are learning and enhancing their skills (Jerbrant, 2013: 152,72). To motivate and inspire project team it is important to provide team members with opportunities for growth and development

(Diaz, 2017, 23). These opportunities should be tailored specifically to cater each team member and can be in the form of further training, setting challenging targets or mentoring some of the team members.

It is always comforting when the ambivalence (neutral / indifferent) are low because it provides a good opportunity to understand the views of many of the respondents – this time ambivalence is a 5%. Those that disagree with the statement (that the teams are not motivated) combined give 78% (25% disagreeing with 53% strongly disagreeing) which can allow for a generalization that the general team member motivation is high. Only 17% of the respondents felt that the teams are not motivated, motivated teams are an assurance that all other things being constant project execution will be a success.

**STATEMENT 8: My team manager combined the projects to eliminate repetition**  
**RESPONSE;** Most of the projects and tasks in the organisation have similarities to the extent that some are the same – this has been cause for many cost overruns or sunk costs that should have been prevented with good management. Some managers have taken certain decisions to reduce the personnel requirement by removing any duplication of tasks operations. The statement was given in that context to try and understand the extent to which some projects / tasks / operations were merged by certain managers. Together with that some employees were performing the same tasks differently as individuals, whereas if employees collaborated they would be able to complement each other and perform better, possibly faster with saving of costs. The respondents said this (figure 5.14) about this.

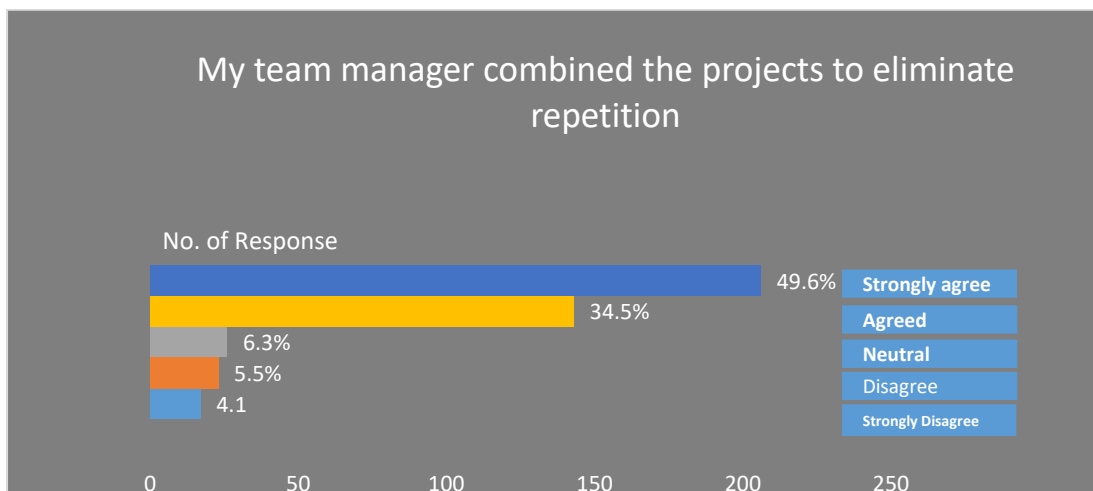


Figure 5.14: My team manager combined the projects to eliminate repetition

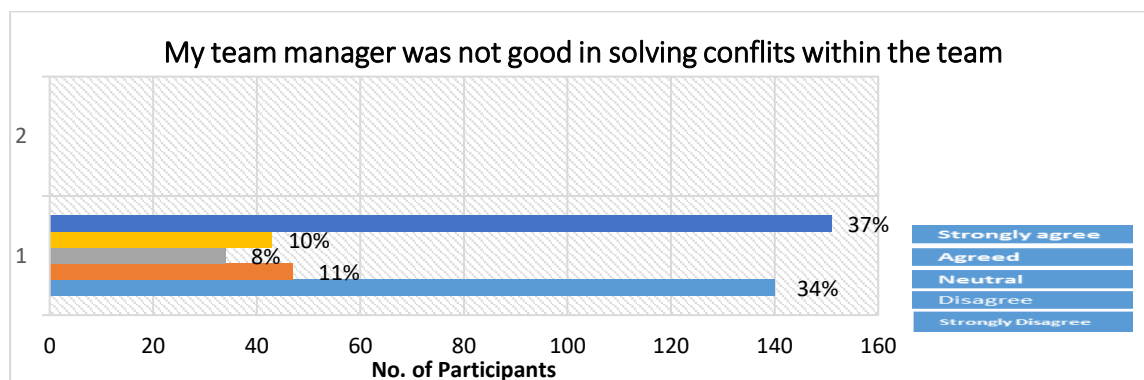
Source: own construction

Not only does project combination make building projects faster and eliminate repetition, but it makes the high performing team and success to a project (Rezvani, 2011:115). combining projects also improve chances of achieving the desired result, gain a fresh perspective on your project and how it fits with your business strategy, prioritise your business' resources and ensure their efficient use (Jowah, 2013:9).

There was a large response positively indicating that the managers had merged or combined the different operations to reduce replication. A strongly agree of 49.6% complemented by those who agree at 34.5% together making a total of 84% who agree with the statement that managers had reduced / eliminated replication and improved operations. Those disagreeing are 9.6% with neutral at 6.3%, both of which have no significant value in comparison.

**STATEMENT 9: My team manager is not good in solving conflicts within the team**

**RESPONSE;** A **conflict** is a result of clash of interests which has as many causes and sources as can be the number of people conflicting (*Fischer, 2012: 1153–1173*). Some conflicts are racial, political, professional differences, or mere effort to control resources in an organisation of situation or the need to have the last voice. In most projects where people come from different disciplines and work on one project, conflicts, stemming from difference of opinion are a common phenomenon. What is critical is the ability of the leadership to manage and or solve the conflict. Behfar, Peterson, Mannis and Trochim (2008: 170,188) state that conflict management is the ability of a manager to limit the negative impact resulting from a fall out between two or more people and allow this to be a learning opportunity for the individuals and the team at large. Conflicts can be dysfunctional to the extent that they become risk factors that may result the failure of the execution of the project.



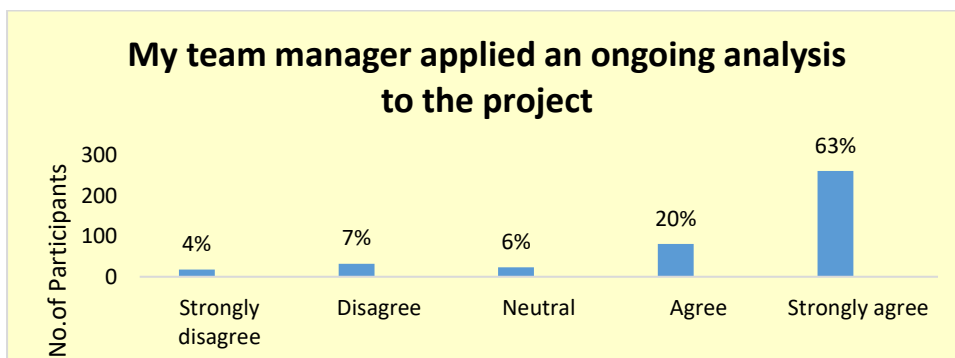
**Figure 5.15: My team manager was not good in solving conflicts within the team**  
Source: own construction

Those in agreement and disagreeing seem to be sharing the spoils, with the total number of disagreeing (strongly disagreeing – 34% and disagreeing – 11%) making a total of 45%. Those in agreement combined make a total of 47% made up of the 37% strongly agreeing and 10% agreeing to the statement. No generalisation can be made – suggesting that there may be too many conflicts unresolved in many parts of the different projects and sub-projects. The low number of project managers able to solve a conflicts is scurry considering the sensitive nature of project execution. Admittedly the process of solving conflicts calls for special skills and abilities to be able to reconcile people opposed to each other (Kristof & Smith, 2012:29), who have to continue to work together towards the same objective after the conflict. Conflicts may be driven by numerous factors (as alluded to above) most of which stern from lack of communication, lack of clarity of roles and by working in silos. The project manager needs the skill to and has the responsibility to solve the conflicts among teams to enable the good working relation that will help with success of project.

**STATEMENT 10: My team manager applies an ongoing analysis to the project execution**

**RESPONSE;** Regular analysis of the project execution progress is a form monitoring and evaluating the progress of the project implementation (Abdul-Rahman, Wang & Muhammad, 2011: 445,455). The purpose of this is to assist continuous assessment of the stages during the implementing or execution of the project, this assists in maintaining the expected relevance and effectiveness of the techniques and tools used for the process. Managers who keep their watch on the processes regularly will identify in time possible risk factors and mitigate them in time.

The response is recorded in the figure 5.16 below.



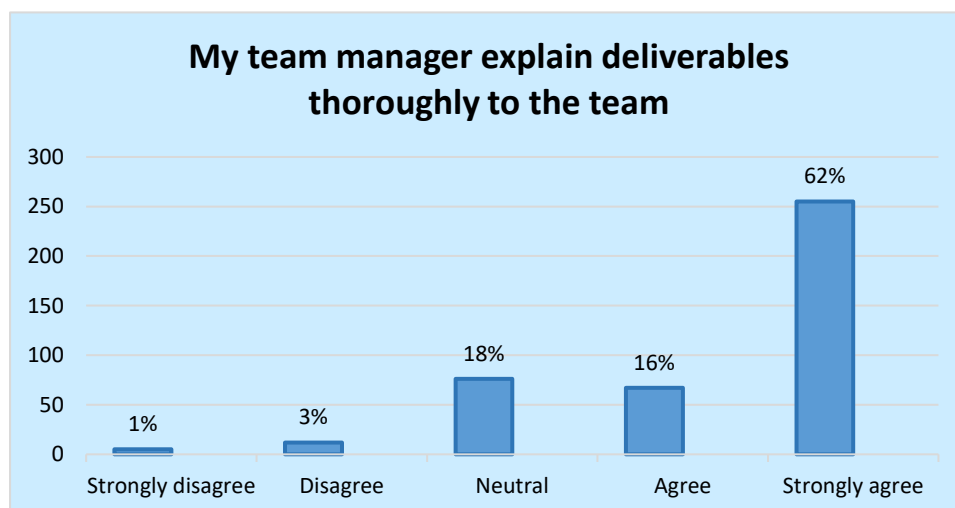
**Figure 5.16: My team manager applied an ongoing analysis to the project**

**Source: own construction**

The response is amazing, 63% strongly agree and 20% agree (83%) that their project managers regularly assess or evaluate the project execution process. This immediately allows for a generalization, indicating that regular assessment and evaluation, supported by regular meetings, allows for efficient execution. Only 6% of the respondents are neutral and 11% of the remainders disagreed with the statement. Studies on EVA, clearly indicate that regular monitoring and analysis of operations assists tremendously in the effective execution of the project processes.

**STATEMENT 11: My team manager explains deliverables thoroughly to the team**

**RESPONSE;** Teamwork is the collaborative effort of people who have one objective in mind, precisely wanting to work together to a meaningful conclusion (Salas & Rosen, 2008: 540,547). Collaboration implies the communication and cooperation of the many people (stakeholders) involved, thereby bringing about oneness of purpose. Explaining the deliverables clearly may assist in renewing in the minds of the workers what is to be achieved for the project. A process deliverable is a route you take to achieve that result and encompasses planning, document creation, information sharing, equipment, money, and software. Since project deliverables are a result of some activity, they must also be explained. The respondents had this to say as recorded in figure 5. 17.



**Figure 5.17: My team manager explain deliverables thoroughly to the team**

**Source: own construction**

The above figure 5.17 shows respondents' views regarding explanation of project deliverables, a total of 78%. Of these total agreeing, 62% of the respondents strongly agreed and 16% of the respondents agreed with the statement above. It is important to explain project deliverables (what should be done and given as a complete project) to assist with the information on what is required. A significantly small number disagreed (total of 4%) and 18% of the respondents were indifferent.

**STATEMENT 12: My team manager integrated the project aspects**

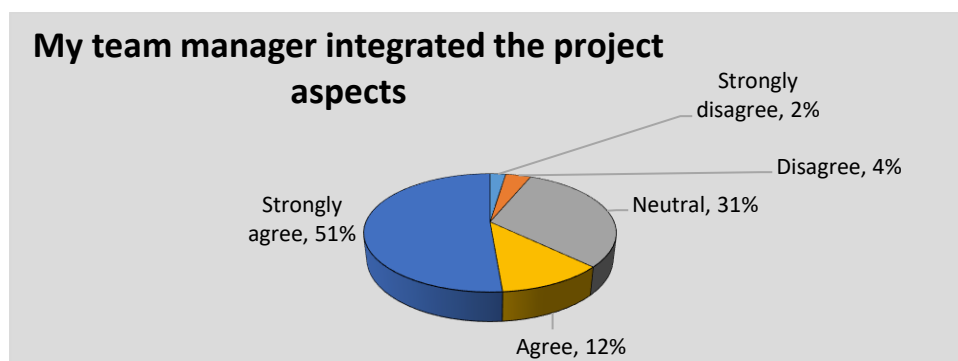
**RESPONSE;** Every project has different aspects which need to be put together, the effective execution of a project is considered in terms of how project aspects can be integrated. Project integration management is the key (latest) PMBOK key knowledge areas for effective execution of projects. There are seven (7) identifiable processes involved in project integration management, these are listed in the table below.

**Table 5.1 Processes involved in project integration management**

Establish a Project Charter	Develop Preliminary Project Scope Statement
Develop Project Management Integration Plan	Direct and Manage Project Execution
Monitor and Control Project Work	Integrate Change Control
Close Project	

**Source (own construction)**

The ability of the manager to develop strategies for integrating all project activities is a critical competency for effective project execution. The respondents' views are illustrated in figure 5. 18 below. Integrated project management is incredibly important considering it helps to make sure that each element of the project is appropriately coordinated. It also keeps track of everything/everyone involved such as stakeholders and resources.



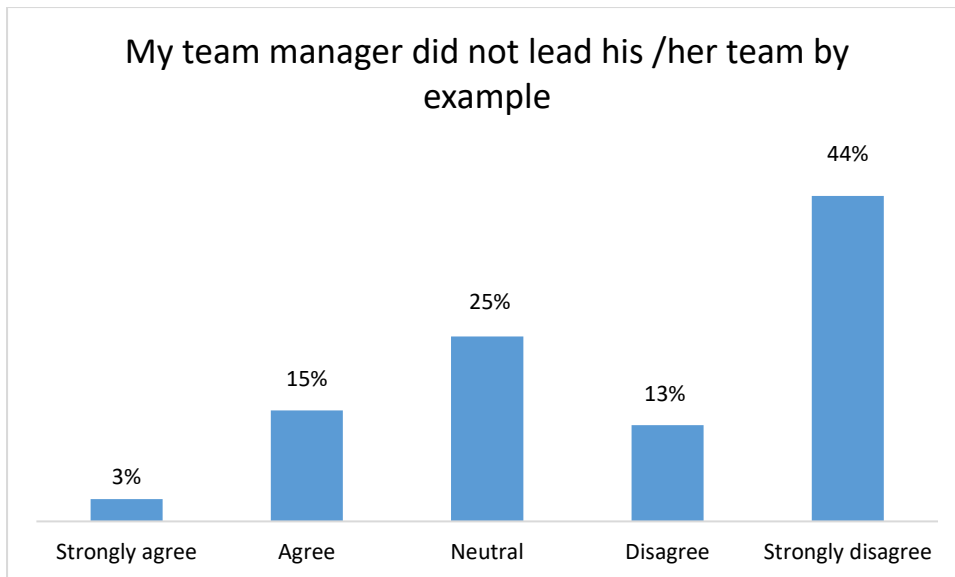
**Figure 5.18: My team manager integrates the project aspects**  
**Source: own construction**

Crawford (2007: 220,228) stipulated that Integration management is a collection of processes required to ensure that the various elements of the projects are properly coordinated. Project integration management is the first knowledge area of the project manager that helps sustaining the stability of the project (Fernandez, 2009: 17). It touches all the phases of project. For a project manager, having proper integration of projects, plan is very crucial as it will ensure that the entire team is working towards a shared goal while staying within the given time frame, scope, and budget for a high performing team that will result to a successful project completion.

Regarding the integration of the project aspects, 63% of the respondents are of the view that the managers integrate the project aspects well enough. Neutral shot high to an unusual high of 31%, leaving a remainder of a total of 6% (2% strongly disagreeing and 4% disagreeing). The reality therefore is that a manager who manages to integrate the project is likely to be a good communicator, possibly has good relationships with the workmates. PMBOK considers this as a critical aspect of effective project execution, if project failure is to be abated and the success rate of projects increased.

**STATEMENT 13: My team manager does not lead the team by example**

**RESPONSE;** Leading is defined in as many ways as there are people trying to define it. In this study leading is the ability to influence other people to voluntarily change their behavior to be compatible with a particular behavior in the process of working to achieve certain objectives (Judge, Bono, Ilies & Gerhardt, 2002: 765,780). For any individual to be able to influence other people, their behavior and personality should be such as to attract the attention of others. It is easier for people to learn what they see in you than what they hear from you. An inspired team is more likely to meet its goals, demonstrate higher levels of engagement and produce higher quality work. Leaders are in a unique position to inspire their employees because they can set an example for how to create a sense of purpose within the organization. The respondents had views that are illustrated in figure 5.19 below.



**Figure 5.19: My team manager does not lead the team by example**

**Source: own construction**

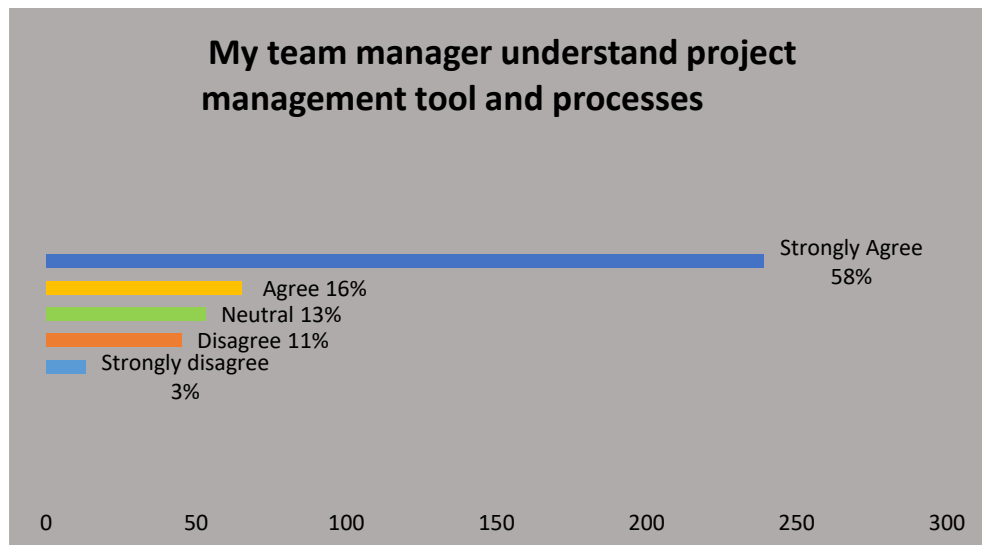
Neutral is on the rise at 25%, and there is this confusion as to why people would not have more understanding of issues of this nature. However, just over 50% of the participants (57%) made up of 44% strongly disagreeing with the statement with 13% disagreeing. Meaning that 57% of the respondents think that their managers to a large extent lead by example, possibly do the right things that the subordinates accept and may want to emulate. In a sense this shows that these respondents may find it easy to trust their leaders, the 18% in agreement with the statement and the 25% who are indifferent are a concern. These findings concur with the findings of Grimshaw and Barron (2010:79) they state that effective leaders set an example of reliability to further strengthen the bonds of trust with team. By showing respect for their obligations, project managers help to reinforce the idea that everyone is accountable for their actions and behavior. Team members know they can count on project managers to do what they say they're going to do.

**STATEMENT 14: My team manager understand project management tools and processes**

**RESPONSE;** Project management tools are the ideas and equipment or structures that will assist in the effective facilitation of the project execution processes. Many different tools can be designed for the purposes of enabling the efficient execution by the project practitioners (Vadapalli & Mone, 2000:127,151). The project tools and their appropriate application is on its own an indication of the project manager's



understanding of these tools and their applicability. That is a competency as the efficient use of these tools helps in the reduction of project execution failure rate. The respondents' views are illustrated in figure 5.20 below.



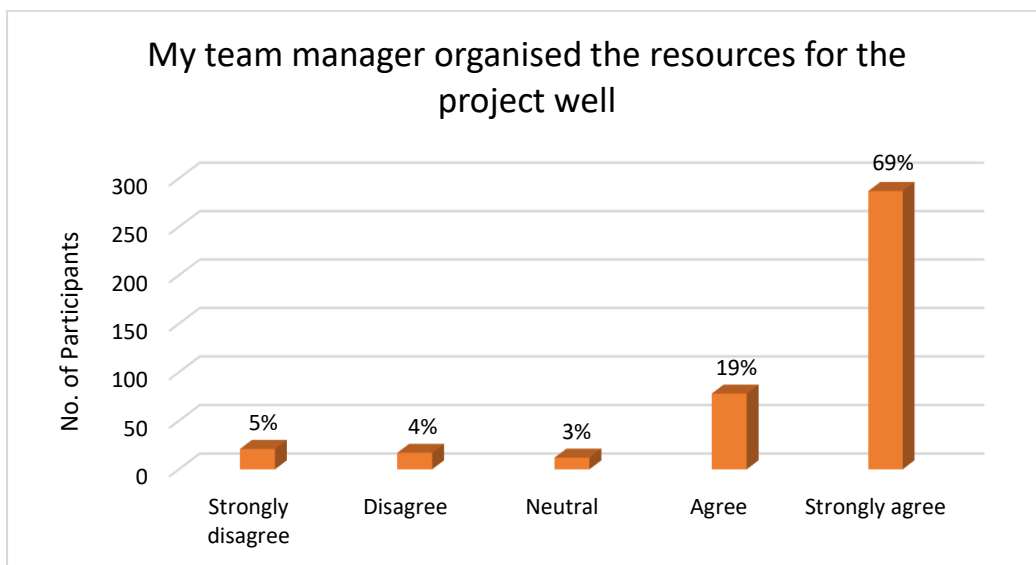
**Figure 5.20: My team manager understand project management tool and processes**

**Source: own construction**

A high acceptance or agreement with the statement is shown by the respondents with those strongly agreeing at 58% and those agreeing at 16%, totaling 74%. A total of 14% of the respondents disagreed (11% disagreed and 3% strongly disagreed) with neutral at 13%. A small number of the respondents either strongly disagreed or disagreed, 3% strongly disagreed and 11% disagreed. Most of the respondents either strongly agreed or agreed that their team manager understood project management tools and processes. It can be generalized that most of the respondents are confident that their managers are well informed or and skilled about the effective use of the project processes tools. The study by Colin, (2015:65,76) emphasised the importance of understanding project management tools and processes, they help project managers to plan, execute and control all aspects of the project. Companies rely on key tools for managing a project to ensure that each task is completed on time and to balance project team workload for optimal time management (Hartmann & Briskorn, 2010:12). Because project management tools and processes enhance resource efficiency and ensure project scope, such tools are especially important for project managers to enhance team performance (Vanhoucke, 2011: 426).

**STATEMENT 15: My team manager organises the resources for the project well**

**RESPONSE;** The PMBOK identifies resource management as one of the key competency / knowledge areas for an effective project team leader. Resources can determine the difference between cost overruns and timely delivery of a project (Belout & Gauvreau, 2004,11), as such this is an important competency. Inability to manage properly the resources, whether in terms of quality or in time deliveries may be a risk factor to successful execution. Delays in the supply of material will result in delays in project completion which implies project cost overruns.



**Figure 5.21: My team manager organised the resources for the project well**

**Source: own construction**

Figure 5.21 above, highlights the team members' views regarding organising resources for the project by project manager. The majority of the respondents strongly agreed (69%) and agreed (19%) making a total of 88%, this allows for a generalization. It can be concluded that the project managers know how to manage resources, be they material or human resources, failure to allocate this appropriately would affect the execution progress for the project. Whilst 5% strongly disagreed and 4% of respondents disagreed (making a total of 10%) that left only 3% neutral. As stated above resource management is one of the key knowledge areas in project management as stated in the PMBOK (2013).

**STATEMENT 16: For work efficiency my team manager ensures that there is effective communication.**

**RESPONSE;** Communication is the process of conveying meaning from one source to a receiver using a method or process understood in the same context by the participants. The medium of communication can take different forms from verbal, formal (written), symbols, signs and any other mutually understandable means of communicating (Ferguson, Lennox-Terrion, Ahmed & Jaya, 2014:464). Project execution success is a result of harmonised communication in the process of putting the different activities together. Every project under execution will have numerous activities (WBSs) managed by different sub-team leaders reporting to the project leader. Communication is the thread that brings together all these units towards the final delivery of a complete project. The respondents helped in providing information in this regard in figure 5.22.



Figure 5.22: Managers' attitude towards effective communication.

**Source: own construction**

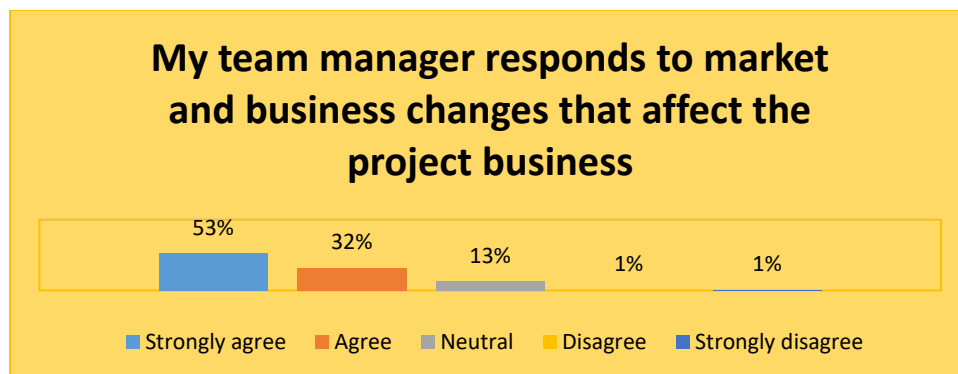
Communication management is a critical aspect of both effective leadership and the ability to bring together different units in project implementation processes. There was, as expected, a large number of respondents who agreed with the statement with a total of 82% agreeing with the statement. In this those strongly agreeing stood at 55%, clearly stating the positive thoughts about the statement, 29% of them agreed. Neutral is low at 5% of a total of 13% in disagreement, this comprised of 7% who strongly disagreed and 6% who agreed. It can be generalized that communication is considered seriously in practice by the managers according to the respondents. That

too in agreement with the existing theory on the impact of effective communication on practitioner morale, team performance and reduction on project failure rates.

The results showed that although effective communication guarantees project success, it is largely dependent on accessible of the project managers to the team members. As Imaga (2015:62) rightly puts it. “It is not how much a manager says, but what he says that matters.” That is why (Nnamseh, 2019:116) sees communication as the means through which members of project relate with one another by interchanging ideals, facts and feeling, through the use of words, letters, memoranda, symbols and bulletins.

### **STATEMENT 17: My team manager responds to market and business changes that affect the project business**

**RESPONSE;** Mason (2018:116) states the operational environment of any business enterprise has an effect on the processes and the performance of an enterprise. It is upon the leadership, and that is what distinguishes well from bad leadership, to adjust to and comply where necessary, but improvise and maximise benefits for the organisation. The external environment stated here involves Political, Economic, Sociological, Technological, Legal and Environmental (PESTLE), analysis. It is basically all the elements of the macro environment of a business. Rastogi and Trivedi (2016: 380,388) postulate that PESTLE has direct and direct impact on how business is operated and the profitability thereof. They posit that the effectiveness of a manager depends on their ability to control and function within those parameters. The respondents shared their opinion on how they perceive the way managers operate within these situations, and this is recorded in figure 5.23 below.



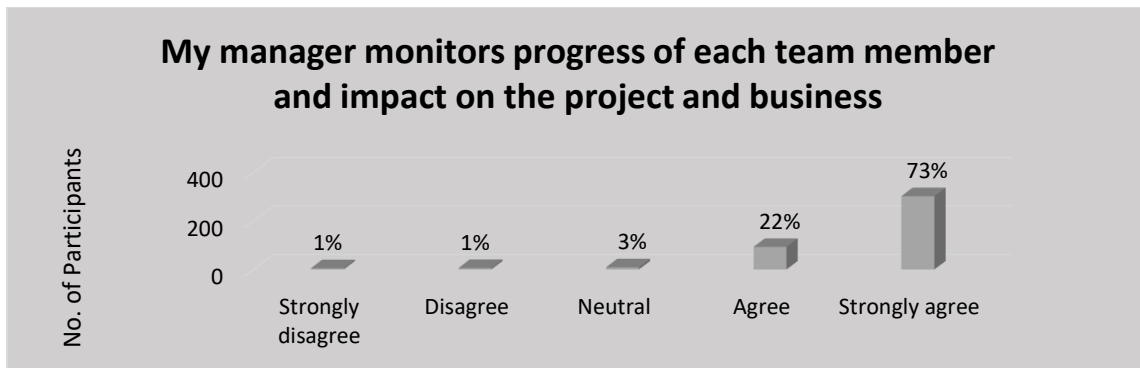
**Figure 5.23: My team manager responds to market and business changes that affect the project business**

**Source: own construction**

The project is not operated nor does it function in a vacuum, it works within external environment which impacts on projects' macro aspects, as well as the micro. Butler and Chinowsky (2016:122) stated that in order to identify and deal with any potential problems that may affect the performance of the team, a project manager should always be aware of market conditions that could affect the team performance and be ready to respond and change plans quickly. In respondents to this the participants in the survey showed an interesting positive strongly agreeing at 53% with those agreeing at 32% giving a total 85% of those that agree with the statement. It may necessary to add here that project and their execution are somewhat very sensitive to changes that impact positively or negatively on the stakeholders. Neutral came in at 13%, considerably higher considering previous responses where neutrality was down to 3%. This is followed by those disagreeing showing up at 1% each of the strongly disagreeing and agreeing. It can be generalized here that the managers talk note on environmental changes and possible work to maximize their positive impact in the middle of those risk factors.

**STATEMENT 18: My manager monitors progress of each team member and impact on the project and business**

**RESPONSE;** Performance management (PM) can be viewed as a process that ensures that the activities to be performed are completed in time and within the prescribed specifications (Weiss & Hoegl, 2015: 589,622). Usually the goals, tasks and activities assigned to individuals add up to be the sum total of what is to be done complete the project execution process successfully. Too often it is imperative that tools and techniques be used to measure the performance, considering that in projects different activities take place at the same time and these are interdependent and interrelated (Marquardt, 2011:180). The delay in one may impact on the completion of the whole projects or aspects in other areas whose progress depends on the successful execution of an activity in a different part of the project. The various activities are themselves aligned to the overall organisational goal, therefore the management of individuals performing tasks "in their corner" is an imperative



**Figure 5.24: Manager and monitoring of individual team members at work**

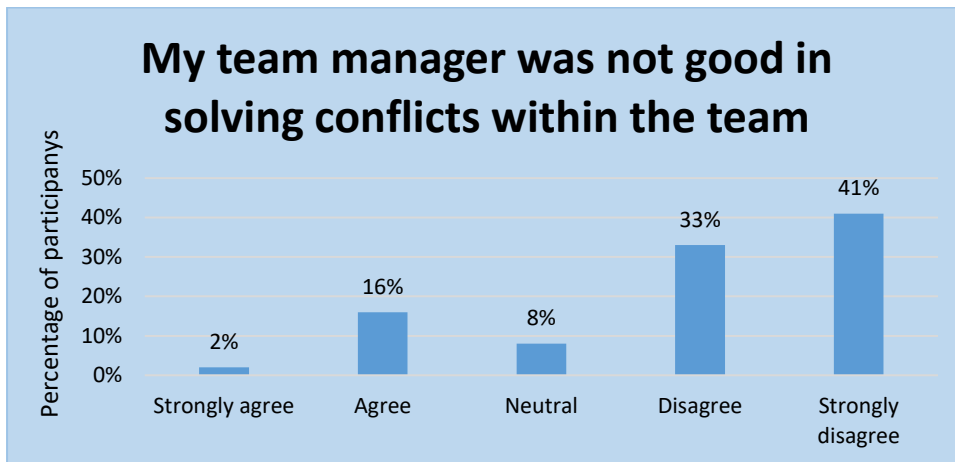
**Source: own construction**

The continuous monitoring of team members will enable the project team manager to know weaknesses and strengths in the system are. It might also assist on the assigning of the tasks to the team members, possibly with intentions to add support and or more resources where necessary. Continuous evaluation tells the leader where the risks may be lying, and this the respondents responded to by showing the results under discussion. A strong showing from those in agreement that this is the approach used by the project managers with 73% strongly agreeing supported by 22% who are in agreement, this totals 95% of the respondents. It can be generalized here that the ordinary if not every project leader carefully monitors individual performance to boost the ability to successfully deliver the project. Furthermore, Kendrick (2015: 52). emphasised that it is important to continuous monitoring of team members because it enables them to be sure about the goal they are achieving (Sajilan & Tehseen, 2015: 20,34). It also shows that the project manager is performing to the highest standard possible. That helps the project team members to find ways of improving performance.

**STATEMENT 19: My team manager never solves conflicts within the team.**

**RESPONSE;** There are different types of conflicts as well as there are different causes of conflicts, in team management this might cause the operations to be dysfunctional (Li, Jiatao, Hambrick & Donald, (2005: 794,813). When there is a conflict in a team, it takes a powerful (influential) individual to bring together the warring parties (if the individual is not part of the problem) so that both parties should participate equally in the resolution of the conflict. Team conflict is a serious risk factor that needs effective management, and unquestionable leadership. Lau, Murnighan & Keith (2005: 645,659). Critical elements of conflict resolution are the presence of a mediator who

will listen, will ask questions, show concern for the relationship and use these to look for common ground. The responses are illustrated in figure 5.25 below.



**Figure 5.25: My team manager was not good in solving conflicts within the team**

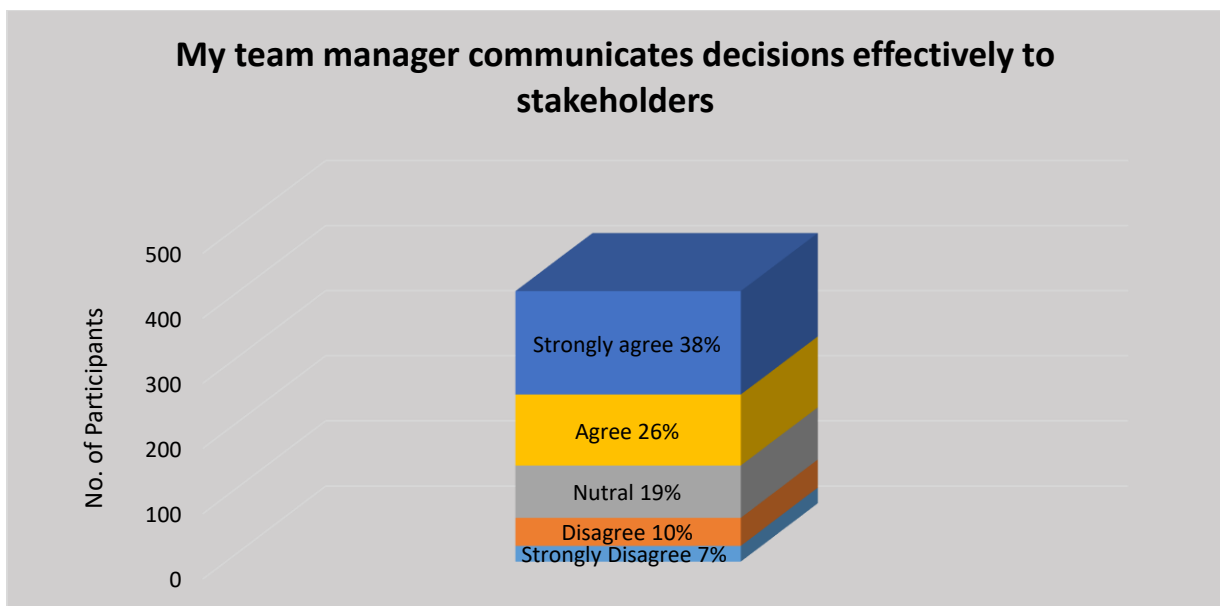
**Source: own construction**

The majority of the respondents (33% disagreed and 41% strongly disagree) disagreed with the statement that the project manager never solves conflicts in the project section they are involved in. This gives a total of 74%, one less than  $\frac{3}{4}$  of the respondents. Whilst neutral was at 8%, 2% and 16% of the respondents strongly agreed and 16% agreed respectively. Conflict management is a critical competency for all practical purposes where groups and teams live, work or socialize together, without leaving out marriages. Hogg and Terry (2000:121,140) suggest that the best way to solve conflicts by the manager is to prevent them in the first place. That is a critical requirement for project leaders and other managers for that matter, that you pre-empt possible conflicts and avoid being reactive when things fall apart.

**STATEMENT 20: My team manager communicates decisions effectively to stakeholders**

**RESPONSE;** Workplace communication is about passing information to and from departments, sections, to the general people in the system. People function in the workplace because of their ability to communicate with each other both horizontally and vertically (Jackson, Dawson & Wilson, 2005:55-65). Effective communication is expected that this communication will be appropriate in that the correct methods, platforms and the rest that goes with effectiveness should be in place (Stevens, 2005:2,9). Communication is critical and indispensable for all groups, let alone in a project with all those complexities involving different activity centres working

independent of each other and yet working on the same project. Moving information from one unit to another calls for a degree of expertise in communication so that no vital information is lost, hence communication management is a knowledge area management competency in projects (PMBOK,2015). Good in time communication stops the building of walls and silos around individuals and teams in general, an effective communicator works to pre-empt all this. The researcher sought to identify the extent to which the respondents consider communication as a critical measure (expectation) from them to stakeholders as a sign of competency in project execution. It would be most ideal if leaders (and indeed general task leaders) would be taught communication as an indispensable skill. What's stopping you from communicating effectively? Common barriers to effective communication include: stress and out-of-control emotions, lack of focus, negative body language and use of ineffective representatives to communicate. The responses are illustrated below in the figure 5.26.



**Figure 5.26: My team manager communicates decisions effectively to stakeholders**

**Source: own construction**

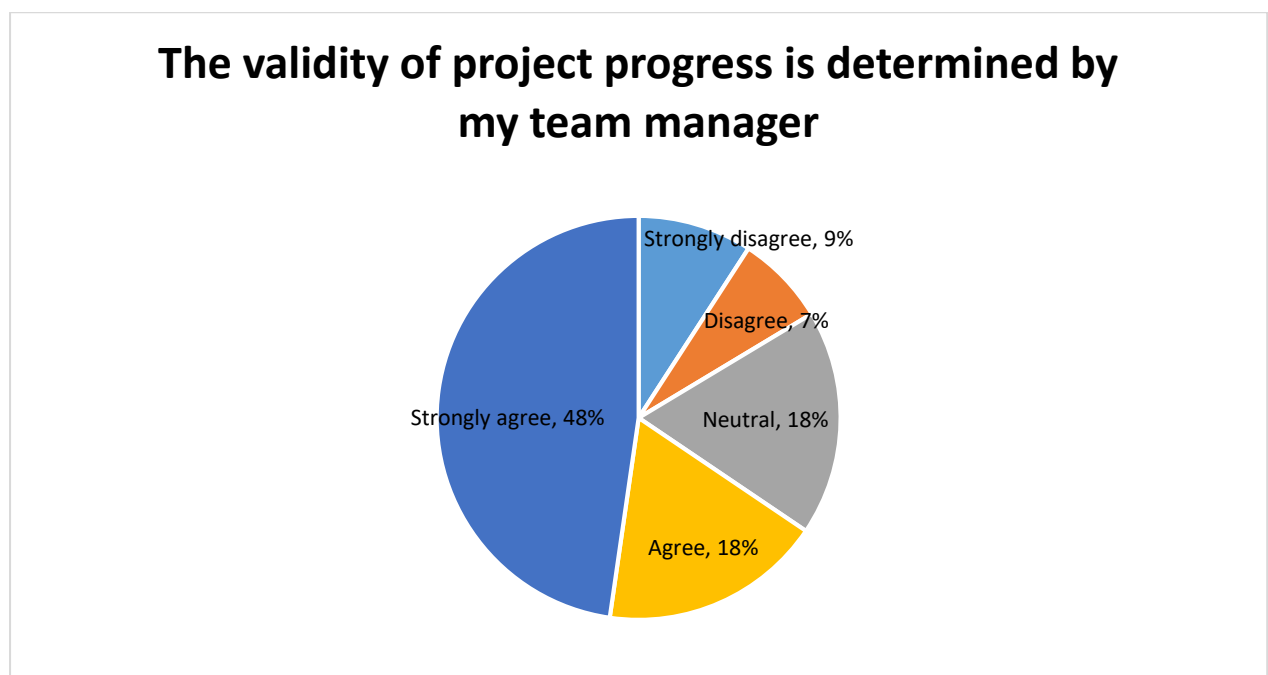
Freeman and Moutchnik (2013:5,9) define stakeholder as individuals, a group of people, or an organisation which has specific interest in a particular organisation or event meant to take place. Stakeholders are people who would be affected positively or negatively if certain things happen and do not happen in an organisation as planned and anticipated. Effective communication with these stakeholders will be of assistance in reducing possible conflicts between the project team and the stakeholders. A



majority of 66% of the research participants made up of 38% strongly agreeing and 26% agreeing. Neutral is increased at 19% with those disagreeing with the statement accounting for a total of 17%, it can be generalized however that the majority of respondents confirm that project leaders keep communication with the stakeholders.

**STATEMENT 21: The validity of project progress is determined by my team manager.**

**RESPONSE;** One of the competencies of a project manager is to track the validity of project progress. Not only in terms of quality of deliverable but also more practically to ensure that the team is getting through the work as planned.



**Figure 5.27: The validity of project progress is determined by my team manager**

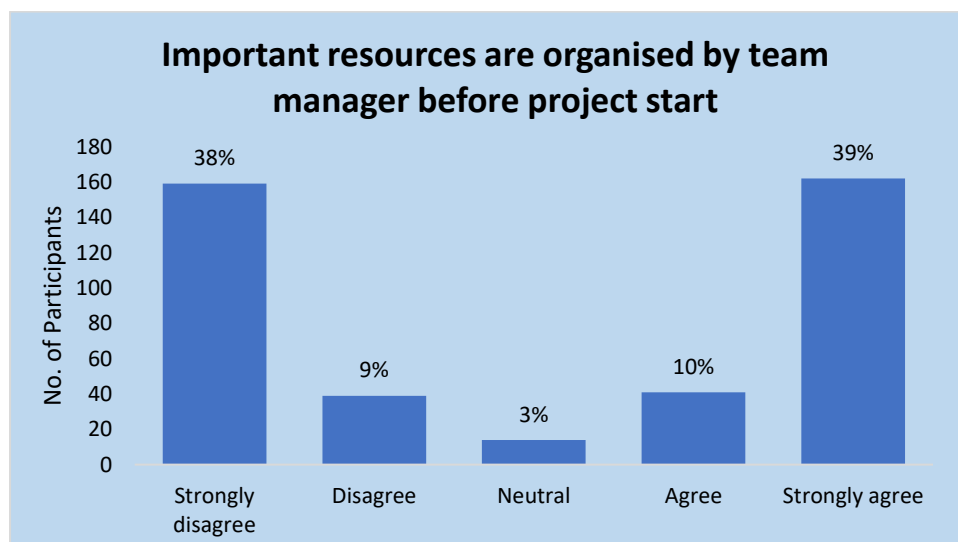
**Source: own construction**

With regards to the validation of project progress, Figure 5.27 shows in percentages the number respondents who agree, disagree and neutral with the above statement. This question was asked because the researcher considered that all respondents have a different background with projects. The responses show a high percentages respondent who agree and strongly agree, 18% agreed and 48% strongly agreed. Whilst 9% strongly disagreed and 7% of the respondents disagreed. 18% responded neutral to the above question. The result on figure 5.27 can be because the team have been working on a successful projects more than twice and they meet their

specifications because the project managers frequently validate the project progress. One of the most important aspects of a project manager's job is measuring validity of the project (Shoshana & Raquel, 2010: 47) It helps project team members stay focused and meet goals, and it helps project managers stay on top of what's happening in the workplace (Jerry et al, 2010: 28).

**STATEMENT 22: Important resources are organised by team manager before project start**

**RESPONSE;** To deliver a project in time, one of the critical requirements are that the project manager should mobilise the team to decide on the resources. The manager may sit on his own and make his own estimation, but project teams are comprised of the leaders of different activities – the work breakdown structures (WBSs). These are generally experts specialised in those aspects, and they would understand more (in a more practical sense) the resources required and the time needed to complete the activities. Thus, using the team to decide on the resources required at the planning stage would be the most ideal way to avoid problems of resource planning. Resource planning by definition is a process used to schedule and allocate tasks and non-human resources for the project. This is important to keep the project within budget and within the scheduled time which has a cost factor, this allows for the tracking of the project processes and progress. The respondents' answers are in figure 5.28.



**Figure 5.28: Important resources are organised by team manager before project start.**

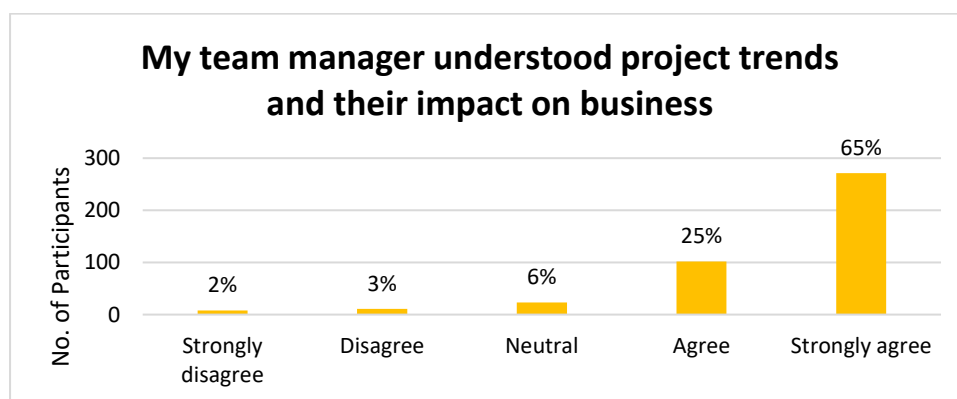
**Source: own construction**

Figure 5.28 above indicates the respondents' views on organizing resources by manager together with the team before the project starts. 39% of the respondents

strongly agreed and 10% of the respondents agreeing making a total of 49%. Those disagreeing scored a total 47% coming from 38% respondents strongly disagreeing and the next is 9% disagreeing. While the total responding gives us no figure to generalize on, at least there is an indication that the respondents are not sure exactly what was required. It is disappointing that there is no clear position on this issue, considering that resource management is part of the critical knowledge management areas of effective project management (PMBOK,2013). This may be an area that needs expanded research to check and evaluate the processes and methods used by project managers when they do resource planning.

**STATEMENT 23: My team manager understood project trends and their impact on business.**

**RESPONDENCE;** Increasingly technology has introduced many other operational tools and techniques that make project execution more efficient. The use of agile, Gantt charts, Microsoft software, and other automations has changed the face of management in general and project execution in particular. “Contingent” project leaders understand that their effectiveness depends on their ability to know, understand and use the technology. The trends in the increase of knowledge will always impact on the work situation in many different and yet practical ways. The respondents expressed their understanding and experience within the projects on this statement and expressed it as represented in figure 5.9 below.



**Figure 5. 29: My team manager understood project trends and their impact on business**  
**Source: own construction**

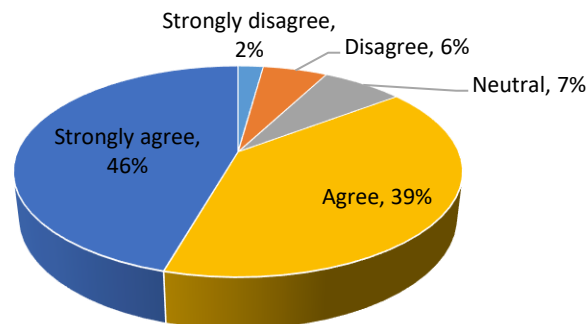
Neutral was low at 6%, it is not clear though why these respondents would be neutral or indifferent on an issue so clear. Could be they didn't understand what it exactly was or whether or not the project leaders ever indicated anything to do with the trends

which affect business. Of particular interest is those disagreeing who total 5%, (2% strongly disagreeing and 3% disagreeing) unlike other statements when those agreeing and disagreeing were nearly equal. The remainder of the respondents (total of 90%) with 65% strongly agreeing and 25% agreeing with the statement that the project leaders follow (possibly understand the impact) the trends in the business environment. It can be generalised that project leaders keenly follow the project trends. This is in agreement with Belbin (2014:29) posited that there was a relationship between the pro-activity of a manager to keep with the trends and competent project execution. Competency in understanding trends was meant known to make the client happy, provides repeat business, gives profitable projects, and creates a workplace conducive for the employee.

**STATEMENT 24: My team manager knew how to allocate time for the execution of the project.**

**RESPONSE;** Time is of the essence in the execution of projects, in fact it is one of the triple constraints that are used to measure the success or failure of the execution of a project. The success the implementation of the project is measured by the time, the quality and the budget (or cost), this is the iron triangle. Toor & Ogunlana (2010: 228,236) who postulated the iron triangle further developed this to include the scope in which case it is referred to as the square root of project execution (Dondana, 2010:21,32). Time is therefore critical in that there is a relationship between the time taken and the cost for labour for instance, meaning bad management of time may lead into cost overruns, and the cost always exceeds the budgeted in such cases. Hence the ability of the project leader to allocate time appropriately for the tasks allows for a possible reduction in project failure. The perceptions of the respondents are diagrammatically illustrated in figure 5.30 below.

## My team manager knew how to allocate time for the execution of the project



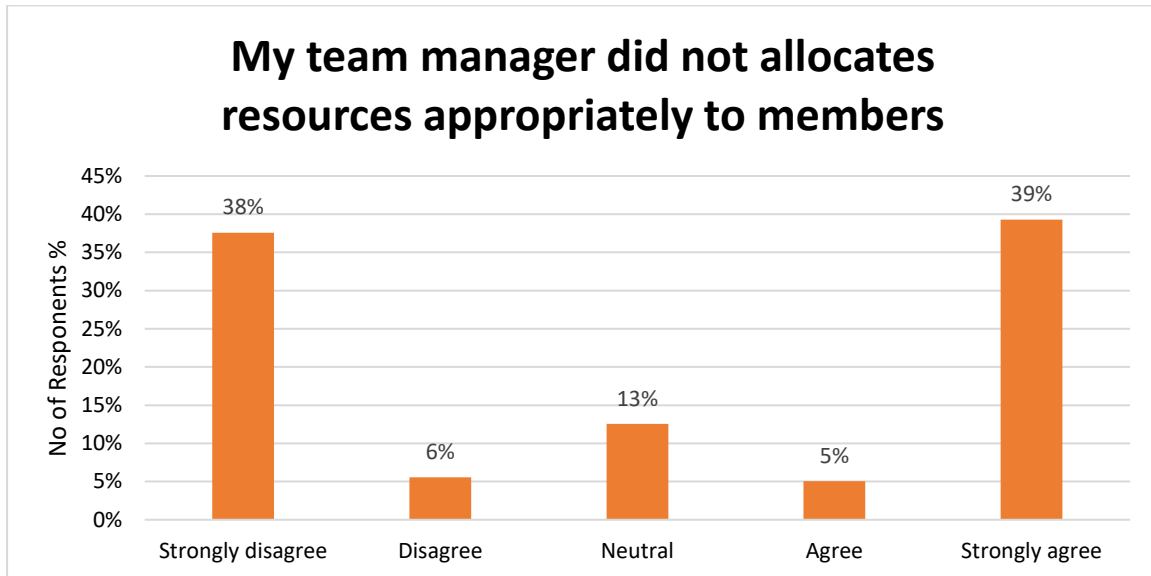
**Figure 5.30: My team manager knew how to allocate time for the execution of the project.**  
**Source: own construction**

The respondents as practitioners have experience in some of the possible causes of success and failure, to this statement 85% were in agreement. Of the total agreeing, 46% strongly agreeing showing indications of how positively the respondents felt about that statement. This was followed by the 39% in agreement, allowing for a generalization at 85% of the total respondents. Evidently the project managers know how to manage their time, possible given previous problems from which lessons may have been learnt. The neutral is at 7%, those disagreeing and strongly disagreeing are 6% and 2% respectively. Project execution phase is the longest part of the project processes (Caltech, 2017: 32) and it is this stage that needs the most care and overseeing to keep within the time and other resources necessary.

**STATEMENT 25: My team manager does not allocate resources appropriately to members.**

**RESPONSE;** As alluded to in the previous statement on resources, these are critical aspects of the effective execution of a project. They would include, among other this, the human resources, the material resources and other support structure that enable the execution to be smooth (Jeong, Kim & Kim, 2016:1,10). Beyond allocating appropriate resources which implies the fitness of the resources to the tasks to be performed, there is consideration of appropriate quantities, appropriate quality, at the appropriate time (Bernroider & Ivanov, 2011: 337,342). If one is given too much too late there may be problems catching up with the other activities in the system as well

as meeting the time schedule. A lot of planning and scheduling is needed in the allocation of the resources; the respondents shared their perceptions as recorded in figure 5.31 below.



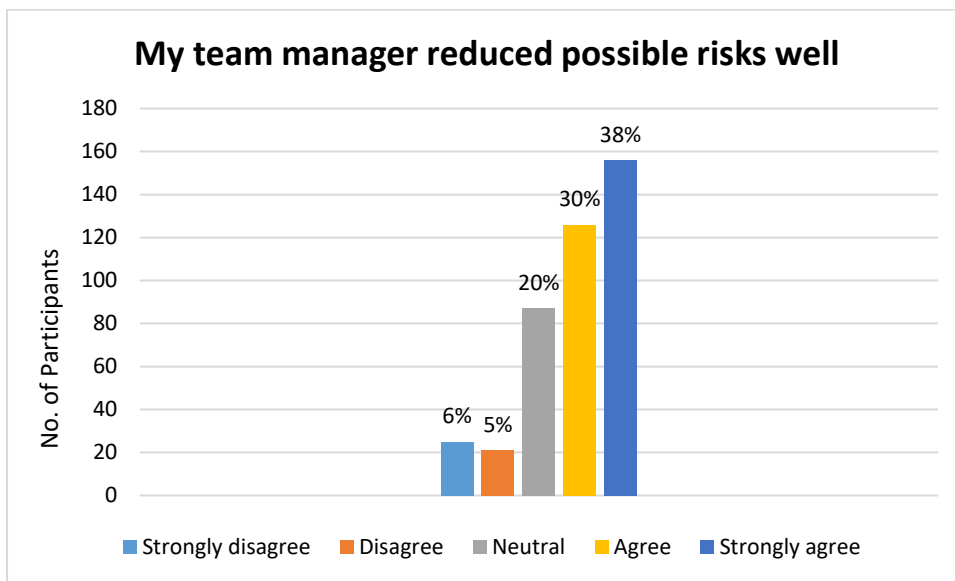
**Figure 5.31: My team manager does not allocates resources appropriately to members. Source: own construction**

The subject matter had been referred to earlier but in the positive, and the responses were positive and promising, if not good. This time the question or statement was stated negatively and the respondents are split right across the middle. It is not clear if this was because others did not understand or know how to respond, however those strongly disagreeing were 38% and the opposing strongly agreeing scored 39%. The scored tore the respondents, right across the middle with those disagreeing at 6% compared to those agreeing at 5%. The differences for both are too small, but the totals for both the agreeing and the disagreeing are 44% apiece splitting the vote right in the middle. No generalisations can be made, if anything it is more confusing than helpful to the research. Albeit, Battling and Gilmartin (2015: 198) posit that resource allocation is one of the most complicated aspects when leading a high-performing project team. It is the responsibility of the project manager ensure that everyone is fully occupied on project tasks, by allocating resources appropriately. Extensive planning is required to execute this task.

STATEMENT 26: My team manager focuses on reducing possible risks

RESPONSE; By definition a risk is any deviation from a planned (expected) route of operation which may negatively affect the project execution process (Locatelli, Mancini

& Romano, 2014: 1395,1410). There are numerous types and sources of project risks, and some of the risks may be know from experience in which case they can be pre-empted in time. Then the other type of risk (Abdel-Hamid, 2011:17,30) for which no previous experience has been gathered become the critical unmanaged risk. Continual risk assessment stage by stage may be an answer to the mitigation of unexpected deviations (Zhang, Wu, Shen & Skitmore, 2014:66,76) and a pro-active approach is a sign of good project leadership. The respondents spoke and their views are illustrated in figure 5.32 below.



**Figure 5.32: My team manager reduces possible risks**

**Source: own construction**

Anything that will make project execution fail is a risk factor, and there are too numerous to state in full. The manager's ability to identify and pre-empt a risk is a critical aspect of project leadership since risk management is one of the knowledge management areas according to PMBOK (2015). The respondents to the research, themselves as practitioners have an understanding of their own – 68% total agreed with the statement. The expectation was that this would may be range in the 80s like the previous ones, but understandably they are measuring what their managers do. Evidently, from the results, there is a large part of the project leaders that does not manage risks as expected. Neutrality went up high to 20% with only a total of 11% disagreeing, the concern is on the 1/5 of these respondents who had no view. It can

however be generalised that the project leaders use risk management to reduce project execution failure.

### 5.3.3 Section C; Open ended section

The open ended section served two purposes, it allowed the respondents to contribute anything else in relation to the subject, and also opened an opportunity to interact with the interviewer. Consequently, this section allowed for additional qualitative research, which was part of the research methodology opted for by using a descriptive research design accommodating both quantitative and qualitative methods. The respondents were requested to provide information, in the same format used in the previous aspects of the questionnaire. Specifically, it was requested of them to indicate things they do not like about their supervisors or managers, to assist in future training on what subordinates expect from their superiors.

The comments coming from the different responses were grouped into similar sentiments and the twelve most frequently repeated sentiments are recorded below. The section requested the respondents to mention any things they didn't like about the company or sections (units) that they worked in. This are put in their ascending order of frequency.

Table 5.1 Top twelve comments from the respondents

1. Always think of themselves	The project managers does not seem to have concern for the employees when there are personal issues. They always focus on tasks to be performed as if they are not performed by people who have feelings and emotions.
2. Bullying by managers	They never show concern for the work or task you have – too often they expect you to finish a task in impossible time. Every time they use threats to punish you, or not get paid even before listening to your story or difficulties.
3. Impolitely speaking	Like shouting at subordinates in the presence of other people, even if one is wrong, there is need for politeness. Too often resentment is built and one stops pulling their weight on their tasks “leaving everything to anything can happen.” “You work just hard enough not to be fired.”
4. Poor listening always	The manager never waits for you to complete a statement when they ask you a question – especially if they think that “you must wrong.” You do not finish a sentence and they never listen to



competes for talking space	what you are saying, too many mistakes could be avoided if leaders listened to subordinates' views. "They always speak first and speak in between and speak last."
5. No proper ethics when correcting a subordinate	Correcting a subordinate should also consider that they need to be taken up together with the project leader in the conversation. People when they feel respected they act responsibly, no one hates to be corrected, but the way you are corrected matters a lot.
6. Wrong estimation of task performance	Allocation of tasks is not always in accordance with the resources (number of people, time and material) and this causes delays in most operations. If the project leaders shared and decided together with their team members, much of the risk could be removed or reduced.
7. Pro-actively resolves conflicts	Leaders always discuss possible conflicts and conflict causes and try to pre-empt possible conflicts. Sessions and training is conducted to help us know the conflict factors and
8. Insensitive to subordinates	Generally, not interested in workers' complaints and requests especially concerning family or other personal issues. Always focused on work and tasks and not the people who perform the tasks they want completed.
9. Bad listening skills	Never has time to listen to workers, even if you wanted to suggest something, you are always treated like you can add value to the work that you do every day.
10. Never takes personal problems seriously	When workers bring a concern or worry about issues in the firm or in their personal lives – you are always told to "do what you came here for." Workers start taking sick leave even if they are not physically sick because they know that they will be no one to empathise with them in their suffering.
11. Bad conflict resolution skills	So many outstanding problems that have not been solved and people start fighting amongst themselves. The managers always say we are old enough to "settle your differences" even over work tasks that may be disputed.
12. Looking for better jobs or transfer to other units	A number of people leave their jobs here – some start by looking for transfer to other units, but if they can't get it they resign and go to other companies. Most of us are not motivated at all because of the types of managers that know too much of technical stuff but never bother about the people performing those tasks.
13. No one acknowledges you for the good work you do.	Subordinates felt that there was no "merit system" to motivate those who were outstanding in their performance. Some people excel better for the same tasks and even helps the slow ones, but managers treat you as though you have not added value. Most of the tasks given a generally too much for individuals, so,

	those who are faster then go out of their own will to help speed up operations. No one recognises that and it is discouraging to those who are motivated and innovative.
14.No training is provided to keep us in touch with other project needs	Things (technology) is changing outside, we are never taken for training and the firm never brings up to date technology for us to perform better. They always push us to perform and meet targets, but they do not invest in new equipment (techniques) and in the training of their human resources.

The grievances were many, specifically because the respondents had been asked to identify weaknesses of their managers. Of particular interest was that the respondents never questioned the technical prowess of their managers, but rather focused on the human relations. Not all the respondents wrote in this section, and rarely the responded cover or complete all the 5 items requested for. Much of the information was scattered, put in differing language and the researcher had to group these. The top 14 most frequently stated concerns were recorded here, this was in response to the request for what the respondents did not like about their work sections. Eikenberry, (2011:147).on his study discovered that technical skill incrementally predicted subordinate perceptions of managerial performance over managerial skill. Referent power mediated the relationship between technical skill and both subordinate ratings and job satisfaction; expert power only mediated for job satisfaction (Caldwell, 2010: 104,113). Rational persuasion mediated the relationship between expert power and subordinate ratings of managerial performance (George, 2011: 164).

#### **5.4 CHAPTER SUMMARY**

This chapter comprised of two sections: quantitative data was presented and analysed in the first section, whereas qualitative data was presented and analysed in the second. Quantitative data was obtained through questionnaires administered to project managers and team members of the firms located in Johannesburg area. The findings were analysed and presented in graphs and table format under the following subheading: biography which included age group, position in the organization kind of project they work on, how long they have been working and how many times they have been promoted. And in section B where they were asked other data including project managers' competencies, factors affecting their performances and project management tools and technique that a crucial for a project manager to enhance team

performance. In the second section, quantitative data was presented and analysed. Although project managers and team members indicated their own benefits from competencies, the benefits were not far from what the literature suggested. With this in mind, the following question can logically be asked: if project managers are successfully applying competencies to enhance project team performance? The importance of applying competencies by project managers to increase performance of project team should not be doubted. Thomas and Mullaly (2008:98) found that for project manager to achieve success when it comes to project team, there is a definite need to find an appropriate competency for the nature of projects undertaken.

## **CHAPTER 6:**

### **SUMMARY OF FINDINGS, INTERPRETATION, CONCLUSIONS AND RECOMMENDATIONS**

#### **6.1 INTRODUCTION**

The study was comprised of 5 chapters in all, throughout all these chapters the intention was to comprehensively provide an objective study. To ensure objectivity, the study started with extensive research on issues to do with project management, and project management tools. This proceeded on to identifying possible causes for the high project failure rate when all the tools are available and the managers have the technical qualifications and experience. This led to the identification of the likely shortage of soft skills more than the need for hard skills in the disciplines in which these projects are executed.

**Chapter 6;** is the final chapter primarily bringing all the work from preceding chapters to an end, the chapter focuses on the findings, summarisation of these findings, conclusions (item by item) and recommendations. Together with this is discussed the limitations to the research and prospects for future studies around this topic – then the final conclusion to the study is given.

#### **6.2 SUMMARY OF THE FINDINGS**

##### **6.2.1 Section A = Biography**

**QUESTION 1; How old are you? Please indicate your age range in the boxes below by ticking the appropriate box below**

**CONCLUSION;** The age of the respondents was 21-30 at 34% just over 1/3 of the respondents, 66% of the respondents were above the age of 30 years. It can be concluded here that there is a possibility of vast experience in this age group and they would know much about the subject under study.

**RECOMMENDATIONS;** it may be interesting that a stratified population may be used in future and check on the perceptions according to the age groups. This might help understand if there is much difference between the age groups, which may be used to measure the distribution of emotional intelligence amongst the different age groups.

**QUESTION 2; What is your position in the organisation?**

**CONCLUSION;** It can be concluded that the population for the study was deal in that a total of 88% of the respondents were not project managers (understudy) and thus they could assess the competencies of their project managers. All of them were practitioners making them valid for the research except the 3% who were project managers heading project team leaders and team members.

**RECOMMENDATION;** It may be ideal to stratify them in future studies or purely identify a category and research on that particular group to understand their thinking. Much of the responses will be predominately from the 65% of the team members, those with other functions are “subdued” in the rest. We would want to know what each group (separately) thinks about certain aspects of this study on project leader competencies.

**QUESTION 3; How long have you been working, including your previous occupation?**

**CONCLUSION;** It is concluded that the largest part of the respondents was not relatively new to the work environment (48%). As individuals they know what they like and dislike from managers or other people they deal with, thus the 24% with 4 years’ exposure and the 3 years at 19% would enable the researcher to come out with valid research findings from a total of 91% who are 3 years and above.

**RECOMMENDATIONS;** As recommended in previous questions, it may be necessary to break these according to the ages to enable a full understanding of the impact on the way people thinking. Besides, it might also be most ideal to carry out these researches (exploratory) in smaller units and narrow the study to responses to particular tasks. There is a relationship between the type of task and the behavior of a project manager or leader.

**QUESTION 4: What kind of project do you work in?**

**CONCLUSION;** It is concluded here that possibly the variations in the results will be largely dependent on the task performed by the respondents. These is an established relationship between task, situation and leader behavior. **RECOMMENDATIONS;** It is recommended here that future studies identify and focus on similar tasks only to be able to identify clearly the competencies relevant to each project task. Included here are construction, infrastructure, information technology and cable installation. These

different tasks would do well if they are studied separately since they require different competencies from the managers.

**QUESTION 5 How many times have you been promoted at any of the places you've worked?**

**CONCLUSION;** It can be concluded here that almost everyone had a promotion of sorts sometime, with 67% have been promoted between 2 and 3 times. As expected there will always be fewer managers than subordinates, hence those getting promotion 4 and 5 times are fewer at 17% and 2% respectively. **RECOMMENDATIONS;** It may be more interesting if the study stratified the population and check closely the promotion with special focus on, what level the individual is at, what level the person is promoted to and what criteria was used to promote. The element of level of education, and other training and skills programs administered could be included in that future research.

**QUESTION 6 How many people report to you?**

**CONCLUSION;** It can be concluded that most of the people responding at whatever level had some form of responsibility over certain people, and at the same time they reported to someone – that qualified them to respond, with 67% stating that they have 0-5 people reporting to them; **RECOMMENDATIONS;** It is not clear how many people do not have anyone reporting to them, it would have been interesting to know these figures accurately; this would probably alter the statistics since those who have some people reporting to them may behave differently when asked the same question in a different category.

**6.2.2 Section B = Likert scale**

The psychometric scale was used specifically because there was going to be measuring of opinions, attitudes, beliefs and other unquantifiable human aspects. Putting this to ranking on a scale would enable the researcher to have a fair understanding of the extent to which individual agreed, remained neutral or disagreed. Regardless, both objective and subjective dimensions help to exhibit "symmetry" and "balance". The typical format of this Likert scale used here is based on the illustration below;

6. Strongly disagree = 1

- 7. Disagree = 2
- 8. Neutral or ambivalent = 3
- 9. Agree = 4
- 10. Strongly agree = 5

All the rankings have been tabulated according to sub-headings, thus the illustrations (graphs, bar charts, pie charts and histograms) from chapter 5 are not repeated here in full. However, the statistics (figures are converted into a table for easy reference. An effective Likert scale includes a series of statements to be ranked on a pre-determined scale on the basis of the strength of the feeling about the statement. These are illustrated statement by statement chronologically as they appear in the questionnaire but this time the findings are put into table form. The statements are based on literature reviewed.

**Table 6.1 Summary of Likert scale statement 1 -5**

		Strongly disagree	Disagree	Neutral	Agree	Strongly agree
		%	%	%	%	%
1	Team manager communicates the scope of the project regularly	10	18	13	20	39
2	We are all listened and given a chance to come with suggestions	3	14	13	22	48
3	The team contribute to the decisions made by manager	32	16	2	13	37
4	My team manager does not have a good relationship with stakeholders	6	9	7	32	46
5	The Stakeholders of my organisation are involved in decision making.	32	13	16	6	33

**STATEMENT 1; Team manager communicates the scope of the project regularly**

**CONCLUSION;** The majority of respondents totaling; 59%, agree that the project managers communicate the scope of the project and it can be concluded that the project leaders generally communicate the scope to the practitioners. Considering the

impact of good communication on project execution, it can be concluded that prospects of successful project execution are enhanced. **RECOMMENDATIONS;** Poor communication is a critical risk factor, the presence of 41% of respondents suggesting that project scope is not communicated is of concern. It is recommended that the organization provide regular training and guidelines on the importance of communication of the scope.

**STATEMENT 2: We are all listened to and given a chance to come with suggestions**

**CONCLUSION;** Listening is a critical skill for all leaders, and it is concluded here that the majority (nearly  $\frac{3}{4}$  - 70%) reported that the leaders listen to the subordinates.

**RECOMMENDATION;** The 30% outstanding is still of concern, and it is recommended that senior management should allow for extended training in leader-listening skills to enhance cooperation and coordination in the execution of the projects.

**STATEMENT 3: The team contribute to the decisions made by manager**

**CONCLUSION;** When the team members are consulted on project matters and help in the decision making, this allows for employee engagement which leads to high performance. Exactly 50% ( $\frac{1}{2}$  of the respondents) believe that the team members are involved in decision making, not an impressive score. **RECOMMENDATION;** It is disappointing that 50% of the project managers do not involve the team members in the decisions about project processes. It is advised that training be provided to the project leaders and that as organizational policy, team members should be involved. A well informed employee is an asset to the organization.

**STATEMENT 4: My team manager does not have a good relationship with stakeholders**

**CONCLUSION;** It can be concluded that the manager has a good relationship with stakeholders, with an impressive 76% supporting that the manager has a good stakeholder relation. **RECOMMENDATION;** The number of project managers in with good stakeholder relations is impressive. It is still suggested that project leaders should be given regular revival sessions on these issues consistently. The 24% gap needs to be eliminated, stakeholder support is a critical competency for effective execution.

**STATEMENT 5: The Stakeholders of my organisation are involved in decision making.**

**CONCLUSION;** When people are involved in the making of decisions in any operation, in as much as it may cause some conflicts, it allows everyone to be engaged. This is



empowering on its own, but it can be concluded that no consensus was reached suggesting that stakeholders are not involved in the project processes. **RECOMMENDATION;** Relevant stakeholders must be involved in the decision making to avoid dysfunctional conflicts. Extensive and regular training is required for project leaders on the identification of critical stakeholders and their participation in the project decision making processes.

**Table 6.2 Summary of Likert scale statement 6 -10**

		Strongly disagree	Disagreed	Neutral	Agree	Strongly agree
		%	%	%	%	%
6	My team manager maintains project objectivity	16	24	4	25	47
7	There is no motivation to the team members to perform well	53	25	5	8	9
8	My team manager combined the projects to eliminate repetition	4	6	6	36	50
9	My team manager is not good in solving conflicts within the team	34	11	8	10	37
10	My team manager applies an ongoing analysis to the project execution	4	7	6	20	63

**STATEMENT 6: My team manager maintains project objectivity**

**CONCLUSION;** A total positive response of 72%, enables us to conclude that one of the project managers’ competencies practised by the leaders of the projects. A fairly could number (score) but it could have been better. **RECOMMENDATION;** It would be most ideal to hold training sessions with the project leaders to emphasise the use of project objectives as a motivator and guide for project practitioners. There is a need to improve the approach and competencies of the 28% to provide a 100% guarantee of high competency.

**STATEMENT 7: There is no motivation to the team members to perform well**

**CONCLUSION;** A good response of 78% suggests that the project leaders motivate the project practitioners or possibly the subordinates. It can be concluded therefore that a large part of the leadership makes the effort to motivate their subordinates and team members. **RECOMMENDATIONS;** There is a 22% of project managers who need to be brought up to speed with the rest of on the motivation of the team members. There would be no substitute to the need to regular hold sessions with the managers and promote the need and methods of motivating the team members to perform.

**STATEMENT 8: My team manager combined the projects to eliminate repetition**

**CONCLUSION;** The strong showing of 84% agreeing that the manager realign the functions to cut down on the duplications is encouraging, clearly it can be concluded that the managers help in the cutting or management of costs and time considering they are related to each other. **RECOMMENDATIONS;** These should be encouraged to continue with processes that should enable the successful execution of projects and where possible maximize the efficiency and the profitability of the project. Cost cutting activities help improve the gross contribution margins of the operations and enable the business to be more viable.

**STATEMENT 9: My team manager is not good in solving conflicts within the team**

**CONCLUSION;** There is a split between the two aspects of this, and this may assist in concluding that there is a serious problem with the handling of conflicts. None of either side reached the minimum 51% that would enable a majority. **RECOMMENDATIONS;** The poor showing on conflict resolution is demotivating to the project practitioners, it is difficult to work where there is conflict. It is hereby recommended that training for employees be conducted at all levels, subordinates focusing on causes and factors around conflicts. Managers must be taught the handling of conflicts as risk factors – training in this should be continuous for all the project practitioners. Conflicts may be driven by numerous factors (as alluded to above) most of which stem from lack of communication, lack of clarity of roles and by working in silos – training should be provided in these areas.

**STATEMENT 10: My team manager applies an ongoing analysis to the project execution**

**CONCLUSION;** There is positive activity and it can be concluded that with 83% agreeing that the managers have project on going analysis, it is an assurance that most risks may be identified early and may be averted. **RECOMMENDATIONS;** There is a need however to strengthen this strong point by continual reference to this in

meetings or providing occasional training to keep the managers abreast. Studies on EVA, clearly indicate that regular monitoring and analysis of operations assists tremendously in the effective execution of the project processes.

**Table 6.3 Summary of Likert scale statement 11 -15**

		Strongly disagree	Disagreed	Neutral	Agree	Strongly agree
		%	%	%	%	%
11	My team manager explains deliverables thoroughly to the team	1	3	18	16	62
12	My team manager integrated the project aspects RESPONSE;	2	4	31	12	51
13	My team manager does not lead the team by example;	3	15	25	13	44
14	My team manager understand project management tools and processes	3	11	13	16	58
15	My team manager organises the resources for the project well	5	4	3	19	69

**STATEMENT 11: My team manager explains deliverables thoroughly to the team**

**CONCLUSION;** Teamwork is the collaborative effort of people who have one objective in mind, precisely wanting to work together to a meaningful conclusion (Salas and Rosen, 2008:540-547). Collaboration implies the communication and cooperation of the many (stakeholders) involved, thereby bringing about oneness of purpose. A total of 78% agreed with the statement and it can be concluded that team managers explain deliverables to the subordinates. **RECOMMENDATION;** It would be advisable that any training programmes for both leaders and followers emphasise the importance of collaborative work during project execution.

**STATEMENT 12: My team manager integrated the project aspects**

**CONCLUSION;** Every project has different aspects which need to be put together, the effective execution of a project is considered in terms of how project aspects can be integrated. Project integration management (PMBOK) key knowledge areas for effective execution of projects. It can be concluded that project leaders integrate aspects of their projects activities (63%) as a key operational competency. **RECOMMENDATION;** All training programmes should including the art of dividing WBSs and integrating the same to complete the project without time of cost overruns.

**STATEMENT 13: My team manager does not lead the team by example**

**CONCLUSION;** Leading is the ability to influence other people to voluntarily change their behavior to be compatible with a particular behavior (Judge, Bono, Ilies and Gerhardt, 2002:765-780) and there is no better way that showing people how to be or to do. In this case 57% confirmed that leadership by example is important / or is practiced by their leaders. **RECOMMENDATION;** Leading by example is more powerful than telling practitioners how to behave themselves. Leaders must be advised that their effectiveness on the followers is based more on what the followers learn from their action. Extensive training on ethical behavior and or leadership is necessary.

**STATEMENT 14: My team manager understand project management tools and processes**

**CONCLUSION;** Many different tools can be designed for the purposes of enabling the efficient execution by the project practitioners (Vadapalli and Mone, 2000:127-151). The project tools and their appropriate application is on its own an indication of the project manager's understanding of these tools and their applicability.

A total of 74% respondents concluded that project tools are a must know and a must have for the effectiveness of a project manager. **RECOMMENDATIONS;** It may be necessary to keep the project coordinators updated and informed (trained even) on new technology that might make their work easy to perform.

**STATEMENT 15: My team manager organises the resources for the project well**

**CONCLUSION;** Resources can determine the difference between cost overruns and timely delivery of a project (Belout and Gauvreau, 2004; 1-11), as such this is an important competency. Inability to manage properly the resources, whether in terms of quality or in time deliveries may be a risk factor to successful execution. The

respondents unanimously 88%, this allows for a generalization. **RECOMMENDATIONS;** Resource manager is a critical aspect of effective project resource management, project managers should be involved right from the planning phases and extensive workshops conducted to enhance efficiencies in this aspect of project execution.

**Table 6.4 Summary of Likert scale statement 16 -20**

		Strongly disagree	Disagreed	Neutral	Agree	Strongly agree
		%	%	%	%	%
16	For work efficiency my team manager ensures that there is effective communication.	7	6	5	27	55
17	My team manager responds to market and business changes that affect the project business	1	1	13	32	53
18	My manager monitors progress of each team member and impact on the project and business	1	1	3	22	73
19	My team manager never solves conflicts within the team.	41	33	8	16	2
20	My team manager communicates decisions effectively to stakeholders	7	10	19	26	38

**STATEMENT 16: For work efficiency my team manager ensures that there is effective communication.**

**CONCLUSION;** The medium of communication can take different forms from verbal, formal (written), symbols, signs and any other mutually understandable means of communicating (Ferguson, *et al* 2014:464). Project execution success is a result of harmonised communication in the process of putting the different activities together. Every project under execution will have numerous activities (WBSs) managed by different sub-team leaders reporting to the project leader. There were 82% agreeing with the statement, allowing for a generalization. **RECOMMENDATION;** communication is the glue that keeps all the activities (WBSs) coordinated and this

needs to be oiled all the time. It is recommended that emphasis should be made throughout the life cycle of a project, and that communication is not for the manager alone, all practitioners have a role to play in communicating.

**STATEMENT 17: My team manager responds to market and business changes that affect the project business**

**CONCLUSION;** Mason (2018:116) states the operational environment of any business enterprise has an effect on the processes and the performance of an enterprise. The external environment involves Political, Economic, Sociological, Technological, Legal and Environmental (PESTLE), Rastogi and Trivedi (2016: 380-388) postulate that PESTLE has direct and direct impact on how business is operated and the profitability thereof. It is encouraging to conclude that 85% of the respondents actually have observed that their project managers are sensitive and respond to external environmental changes. **RECOMMENDATION;** leaders need to have a broad understanding of the environment and the likely impact on the project processes to minimize the occurrence of unmanaged uncertainties – risks. Constant environmental change-awareness is needed for effective leadership.

**STATEMENT 18: My manager monitors progress of each team member and impact on the project and business**

**CONCLUSION;** time is of the essence in project execution and if the operations are well managed, the performance may be optimum and avoid any delays or time overruns (Weiss and Hoegl, 2015: 589–622). Each task to be performed is part of the whole, thus each needs to be managed, and 95% of the respondents concluded that this was a critical element of project execution. **RECOMMENDATION;** there may be a need to train the managers on effectively managing performance, and the practitioners themselves need constant up skilling of the tasks that they are expected to perform.

**STATEMENT 19: My team manager never solves conflicts within the team.**

**CONCLUSION;** some types of conflicts may cause the project processes to collapse (Li, and Hambrick, 2005: 794–813). Team conflict is a serious risk factor that needs effective management, and unquestionable leadership. It is encouraging to see that 74% of the respondents indicated that their managers solve or try to resolve team conflicts. **RECOMMENDATIONS;** team members in general need to be made aware

of what a conflict is, how it starts and develops, until it becomes a problem, and they should also know how to pre-empt the occurrence of any of those disagreements.

**STATEMENT 20: My team manager communicates decisions effectively to stakeholders**

**CONCLUSION;** communication is about passing information, people function in the workplace because of their ability to communicate with each other both horizontally and vertically (*Jackson, Dawson and Wilson, 2005:55-65*). Communication is a key knowledge area for project execution, too often there are barriers to communication and this creates operational problems leading to project execution failure. A score of 66% confirmed the importance and that the manager communicates with stakeholders for the effective functioning of the project processes. Freeman and Moutchnik, (2013:5-9) defines stakeholder as individuals, groups and organisations who have a stake in the project. **RECOMMENDATION;** the project managers need to know who the stakeholders, the important role they play, what impact they have on the organizational operations, their interests and how to communicate with or solve conflicts with them without disrupting the operations.

**Table 6.5 Summary of Likert scale statement 21 -26**

		Strongly disagree	Disagreed	Neutral	Agree	Strongly agree
		%	%	%	%	%
21	The validity of project progress is determined by my team manager.	9	7	18	18	48
22	Important resources are organised by team manager before project start	38	9	3	10	39
23	My team manager understood project trends and their impact on business.	2	3	6	25	65
24	My team manager knew how to allocate time for the execution of the project.	2	6	7	39	46
25	My team manager does not allocate resources appropriately to members.	38	6	13	5	39

26	My team manager focuses on reducing possible risks	6	5	20	30	38
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**STATEMENT 21: The validity of project progress is determined by my team manager.**

**CONCLUSION;** One of the competencies of a project manager is to track the validity of project progress. Not only in terms of quality of deliverable but also more practically to ensure that the team is getting through the work as planned. To this 66% of the respondents agreed that this was the practice with their managers allowing for a generalisation. **RECOMMENDATION;** there is need for the convenience of the other practitioners that they be made to understand the role of the project manager, and assist in the processes.

**STATEMENT 22: Important resources are organised by team manager before project start**

**CONCLUSION;** Project leaders need to be involved in the initial stages of project planning, this would enable them to contribute and understand better the project. Too often they have to study the project for them to know the requirements, clearly an ineffective way of preparing the project manager for successful execution. It can be concluded here that the respondents are divided on this issue and there is no consensus on the matter. **RECOMMENDATIONS;** adequate resource planning and procurement is needed, including any form of training if necessary because of the critical nature of resources to project execution. Supplier contracts and all that needs to be planned and agreed on before execution commences.

**STATEMENT 23: My team manager understands project trends and their impact on business.**

**CONCLUSION;** Increasingly technology has introduced many other operational tools and techniques that make project execution more efficient. The use of agile, Gantt charts, Microsoft software, and other automations has changed the face of management in general and project execution in particular. “Contingent” leaders know that their effectiveness depends on their ability to understand and use technology. There were altogether a total of 90% respondent who agreed with the assertion, enabling the conclusion that project trends are a critical competency for a project leader. **RECOMMENDATION;** effective leaders know the importance of keeping abreast with information, technology and any other factors that may affect business



operations. It would be ideal if the project practitioners become members of some of the technology magazines or join institutions involved in technology advancement.

**STATEMENT 24: My team manager knew how to allocate time for the execution of the project.**

**CONCLUSION;** The success or failure of a project depends largely on the triple constraints of time, budget and quality. If one is missed the whole process goes off course, thus time keeping is essential for project execution. Hence the ability of the project leader to allocate time appropriately for the tasks allows for a possible reduction in project failure and that constitutes a competency. To this statement 85% were in agreement allowing for a generalisation, it can therefore be concluded that time management is a critical competency. **RECOMMENDATION;** There should be continuous reminding of practitioners and task operators that time is critical in project execution, as that is one determinant of project success or failure.

**STATEMENT 25: My team manager does not allocate resources appropriately to members.**

**CONCLUSION;** Failure to allocate timeously and appropriately (quantities and right product) will inevitably impact badly on project execution and successful execution. No conclusion can be reached on this as the respondents are divided almost equally on both sides. **RECOMMENDATIONS;** It may be very important for project leaders, WBSs heads and the rest of the stakeholders to plan the resource allocation together. There is also a need to hold regular meetings in advance of any new tasks within the project and iron out likely problems with procurement and resource allocations.

Albeit, Battling and Gilmartin, (2015:134-179) posited that resource allocation is one of the most complicated aspects when leading a high-performing project team. It is the responsibility of the project manager ensure that everyone is fully occupied on project tasks, by allocating resources appropriately. Extensive planning is required to execute this task.

**STATEMENT 26: My team manager focuses on reducing possible risks**

**CONCLUSION;** A risk is any deviation from a planned (expected) route of operation which may negatively affect the project execution process (Aritua, Smith and Bower, 2009: 72–79). There are numerous types and sources of project risks, and some of the risks may be known from experience in which case they can be pre-empted in

time. The PMBOK lists risk management as a critical knowledge area and the ability to manage that is a key competency in the project execution process. Respondents scored a 68% allowing for a conclusion / generalisation (in agreement with statement) that team leaders work to reduce risks. **RECOMMENDATIONS;** It will be necessary that all operations be assessed of possible risks in advance to allow for avoiding or minimising the risk. Regular adequate training on risks and the probability of them taking place should always be calculated. The training should include lessons learnt to reduce if not eradicate the risk fully in the event this may disrupt operations.

### 6.2.3 Section C = Open ended section

The open ended section served two purposes, it allowed the respondents to contribute anything else in relation to the subject, and also opened an opportunity to interact with the interviewer. Consequently, this section allowed for additional qualitative research, which was part of the research methodology opted for by using a descriptive research design. The respondents were requested to provide information, in the same format used in the previous aspects of the questionnaire.

The comments coming from the different responses were group into similar sentences and the ten most frequently repeated sentiments are recorded below. This are put in their ascending order of frequency.

Table 6.6 Ten most frequently sentiments

1. Always think of themselves	The project managers does not seem to have concern for the employees when there are personal issues. They always focus on tasks to be performed as if they are not performed by people who have feelings and emotions.
2. Bullying by managers	They never show concern for the work or task you have – too often they expect you to finish a task in impossible time. Every time they use threats to punish you, or not get paid even before listening to your story or difficulties.
3. Impolitely speaking	Like shouting at subordinates in the presence of other people, even if one is wrong, there is need for politeness. Too often resentment is built and one stops pulling their weight on their tasks “leaving everything to anything can happen.” “You work just hard enough not to be fired.”

4. Poor listening always competes for talking space	The manager never waits for you to complete a statement when they ask you a question – especially if they think that “you must wrong.” You do not finish a sentence and they never listen to what you are saying, too many mistakes could be avoided if leaders listened to subordinates’ views. “They always speak first and speak in between and speak last.”
5. No proper ethics when correcting a subordinate	Correcting a subordinate should also consider that they need to be taken up together with the project leader in the conversation. People when they feel respected they act responsibly, no one hates to be corrected, but the way you are corrected matters a lot.
6. Wrong estimation of task performance	Allocation of tasks is not always in accordance with the resources (number of people, time and material) and this causes delays in most operations. If the project leaders shared and decided together with their team members, much of the risk could be removed or reduced.
7. Pro-actively resolves conflicts	Leaders always discuss possible conflicts and conflict causes and try to pre-empt possible conflicts. Sessions and training is conducted to help us know, identify and understand communication problems that cause conflicts. Examples of previous conflict causes are discussed and everyone is taught to learn to pro-actively avoid activities that cause conflicts.
8. Insensitive to subordinates	Some managers don’t put value on other people’s social and family problems – yet they are quick to address their own problems. “My boss refused a workmate to get time off to attend to a cousin’s funeral because it was busy. A few days later the boss took two days off because his special dog had passed away.”
9. Bad listening skills	All the time when you narrate incidents they interject you before you finish, soon after they may conclusions on the same matters. Project managers must be sent for training on communication and listening skills so that they can be able to attend to problems properly. Most conflicts with managers are because they never listen to a subordinate, they always make their own conclusions without information.
10. Bad conflict resolution skills	Some managers show serious when we have conflicts, you will notice that there are certain people who are always favored. Any conflict with the manager’s favourite, even if you are correct, you are blamed or the manager never makes a decision on the problem. Many managers call the people fighting separately and never bring them together to hear both sides of the story in one sitting. Many of our managers have lost cases at the CCMA because of how they attend to conflicts.

The respondents had much to say about the project leadership patterns and behavior practice by the different managers. Inevitably views differed for various reasons, individual’s perceptions about certain behavior, some differences are because

different managers were “observed” by different individuals in different sections and task centres. Overall a holistic picture is painted of the different leaders and their different behavior, and how that impacts positively or negatively on employee performance. The workers / employees, subordinates or followers, which ever term may be used, are the direct recipients of the good or bad management style. These therefore are in a much better position to identify the competencies most ideal for motivating the employees to perform.

### **6.3 LIMITATIONS OF THE RESEARCH**

The research had a few limitations, it was focused on the operations of one organization even though the survey was conducted in different sites. Besides, the tasks were not always the same tasks, and it has been established from literature review that different tasks would require different operational procedures. Besides, it would have been much better if a tool was developed on the basis on which the standards can be measured and make the finding more scientific. The responses from the participant are largely their perceptions which are not measurable nor are they quantifiable nor comparable since they are largely perceptions. A much broader study including more organisations in the same type of business may have produced more generalizable findings because different organisations have different organizational cultures.

### **6.4 PROSPECTS FOR FUTURE STUDIES**

It may be of interest in the future to stratify the operations and study those tasks which are homogenous on their own to establish operational practices. Other studies focused on the project leaders themselves to provide a “lessons learnt” study to evaluate their perception about what has worked well, what did not work well, and what they would, now in retrospect, do differently. Such a study would enrich the readership on what constraints and pressures the leaders work under and help understand why they make some of the decisions they make. This could also be extended to ask the project leaders what training they think they need if they are to be more effective than they have been to date.

## **6.5 RECOMMENDATIONS**

It is recommended that an all-inclusive and collaborative approach be used in the training of practitioners at all levels and both vertically and horizontally. It pays dividends when every one of the participants is well informed and incorporated into the processes. Jowah and Beretu (2019: 264-273) make reference to the critical impact on production as a result of employee engagement. The employee that is taken in for training and is entrusted with knowledge about all the operations tends to actively participate and contribute to the operational welfare of the organisation. When employees are engaged, they take ownership and they become innovative and or creative to the extent that this might reduce pressure from the project manager and enable them to focus on more strategic than operational issues. Training, communication, empowerment and collaborative approaches will be recommended for effective project execution with reduced chances of failure.

## **6.6 CONCLUSION**

The objectives of the study were the identification of competencies that were needed by project leaders to effectively execute projects through their life cycle. Numerous have been identified leading to the generalizations (conclusions) about what the respondents reported as being effective and helpful. Inevitably, they did not always agree at the same level of intensity, but the competencies have been clearly identified through the study. It can be concluded that on the main the objectives of the study have been met and “best practice” behaviours have been clearly identified. This would be of tremendous assistance to those aspiring to or who are already in project leadership to sharpen their performance. Critical in all this as evidenced in the stage by staged reporting that effectiveness would depend largely on the ability of a leader to be contingent, communicative and collaborative. This research finding should be of assistance to many project coordinators at their different levels and with the different types of tasks. Contingency demands that the leaders adjust to suit their circumstances, and that will count for competency in the execution of projects.

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# QUESTIONNAIRE

## THE IMPACT OF PROJECT MANAGER'S COMPETENCIES ON INFORMATION TECHNOLOGY PROJECT TEAM PERFORMANCE

This is an academic exercise, no information will be given to any authority, and please do not put any marking that might identify you or the organisation. Indicate your answers by ticking in the appropriate boxes below.

### SECTION A

#### BIOGRAPHY

1. How old are you? Please indicate your age range in the boxes below by ticking the appropriate box below.

Less than 20	21-30	31-40	41-50	51+
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2. What is your position in the organisation? Please state in the space below.

Team leader	Project member	Team	Project leader	Project manager	Other
-------------	----------------	------	----------------	-----------------	-------

Specify \_\_\_\_\_ if \_\_\_\_\_ other;

.....

3. How long have you been working, including your previous occupation, please indicate below? \_\_\_\_\_
4. How many people report to you? \_\_\_\_\_
5. What kind of project do you work in?

IT	Construction	Infrastructure project	Capital	Other
----	--------------	------------------------	---------	-------

6. If other, please specify .....

7. How many times have you been promoted at any of the places you've worked?

\_\_\_\_\_

## SECTION B

Please indicate your agreement by making a cross (X) in the appropriate cell.

STATEMENTS		Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1.	My team manager communicates the scope of the project well	1	2	3	4	5
2.	My team manager did not lead his team members by example	1	2	3	4	5
3.	We are all listened to and given a chance to offer suggestions	1	2	3	4	5
4.	My team manager understands project management tools and processes	1	2	3	4	5
5.	My team manager organised the resources for the project well	1	2	3	4	5
6.	The team contribute to the decisions made by manager	1	2	3	4	5
7.	For work efficiency my team manager ensures effectively communication	1	2	3	4	5
8.	My team manager did not have a good relationship with stakeholders	1	2	3	4	5
9.	My team manager responds to market and business changes that affect the project and business	1	2	3	4	5
10.	The Stakeholders of my organisation are involved in decisions making	1	2	3	4	5
11.	My manager monitors progress of each team member and impact on the project and business	1	2	3	4	5
12.	My team manager explain deliverables thoroughly to the team	1	2	3	4	5
	My team manager maintained project objectivity					
13.	My team manager communicates decisions effectively to stakeholders	1	2	3	4	5
14.	There is no motivation to the team members to perform well	1	2	3	4	5
15.	My team manager combined the projects to eliminate repetition	1	2	3	4	5
16.	My team manager was not good in solving conflicts within the team	1	2	3	4	5
17.	The validity of project progress is determined by my team manager	1	2	3	4	5
18.	My team manager did not ask Thoughtful Questions	1	2	3	4	5
19.	Important resources are organised by my team manager before the start of the project,	1	2	3	4	5



20.	My team manager applied an ongoing analysis to the project	1	2	3	4	5
21.	My team manager integrated the project aspects	1	2	3	4	5
22.	My team manager understood project trends and their impact on business	1	2	3	4	5
23.	My team manager did not allocates resources appropriately to members	1	2	3	4	5
24.	My team manager reduced possible risks well	1	2	3	4	5
25.	My team manager knew how to allocate time for the execution of the project	1	2	3	4	5

**SECTION C**

List below in point form 5 comments that you would want to make about the above mentioned topic.

1.....  
.....

2.....  
....

3.....  
....

4.....  
....

5.....  
....

Thank you for participating, be reminded, none of the information provided here will be given or shared with anyone.

**THANK YOU**

## ANNEXURE B

### THE IMPACT OF PROJECT MANAGER'S COMPETENCIES ON PROJECT TEAM PERFORMANCE

#### ORIGINALITY REPORT

20%	5%	4%	14%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

#### PRIMARY SOURCES

1	Journal of Organizational Change Management, Volume 17, Issue 2 (2006-09-19) Publication	4%
2	www.shrm.org Internet Source	2%
3	Submitted to University of Florida Student Paper	1%
4	Submitted to Kolej Universiti Islam Sultan Azlan Shah Student Paper	1%
5	Submitted to Cape Peninsula University of Technology Student Paper	1%
6	Submitted to Colorado Technical University Online Student Paper	1%
7	hbr.org Internet Source	1%

Submitted to Campbellsville University



**ANNEXURE D**

**9 Kingsbury Crescent Ave**

**Highbury Park**

**Kuilsriver 7580**

**7<sup>th</sup> May 2021**

**GRAMMARIAN CERTIFICATE**

**TO WHOM IT MAY CONCERN**

This certificate serves to confirm that I edited the language / grammar for the student Nozuko Sityodana [Student No; 212122398] of the Cape Peninsula University of Technology, M. Tec; Business Administration in Project Management.

**The title of the dissertation is; “The impact of Project manager’s competencies on project team performance.”**

Recommendations for corrections were made and the student duly corrected as per the language editor’s recommendations. I am satisfied with the corrections made and hereby award a language / grammarian certificate.

**Sincerely yours,**



**P. Y. Mabhuro**

**M. A. Linguistics** [chimotov8@gmail.com](mailto:chimotov8@gmail.com); 0828155210