# INFLUENCE OF CRITICAL SUCCESS FACTORS ON PROJECT PERFORMANCE: A CASE OF THE NATIONAL TRANSPORT AND SAFETY AUTHORITY OF KENYA

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## DECLARATION

This research project is my original work and has not been submitted for examination in any other university.

Signature…… Date…….

**MATHEW MUTUA MUNYAO**

**L50/71062/07**

This research project has been submitted for examination with my permission as the University supervisor.

Signature…… Date……

**CHRISTOPHER GAKUU, PhD**

**PROFESSOR**

**UNIVERSITY OF NAIROBI**

# DEDICATION

I dedicate this research project to my wife Mary, children Wasya, Wathi and Wawa for their love, support, patience and encouragement.

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# LIST OF ACRONYMS AND ABBREVIATION

| | |
|---|---|
| CFS | Critical Success Factors |
| IEG | Independent Evaluation Group |
| NTSA | National Transport and Safety Authority |
| PM | Performance Management |
| SPSS | Statistical Package for Social Studies |
| TIMS | Transport Integrated Management Project |

# LIST OF ACRONYMS AND ABBREVIATION

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| CFS | Critical Success Factors |
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| NTSA | National Transport and Safety Authority |
| PM | Performance Management |
| SPSS | Statistical Package for Social Studies |
| TIMS | Transport Integrated Management Project |
| US | United States of America |

# ABSTRACT

**In this study the influence of Critical Success Factors on Project Performance has been investigated, taking the case of the National Transport and Safety Authority of Kenya. In this pursuit, four specific research objectives were advanced to guide the inquiry. They included: to examine in what ways Leadership Sponsorship influence project performance; to assess how Human Relation Orientation influence project performance; establish in what ways Communication Orientation influence project performance and to determine how Goal Orientation influence project performance. The study applied a cross-sectional survey research design owing to its ability to allow quantitative and qualitative data from a large population. The study had all employees of the National Transport and Safety Authority who are the project participants in five key management projects at the Authority as the target population. This study used two instruments; a questionnaire and an interview schedule. Questionnaires were administered by the researcher. The study had both quantitative and qualitative data. Using descriptive and inferential statistics, quantitative data was analyzed while content analysis was used to analyze qualitative data. Inferential statistics such as Pearson correlation coefficient and chi-square test was used to analyze quantitative data. Results of quantitative data analysis are presented in tables.**

**The Findings revealed that project performance is determined by Leadership Sponsorship, Goal Orientation and Communication Orientation. When leadership changed by 1 unit, then there was in the same direction a corresponding change by 1.29 units of project performance in the same direction. Similarly, a change in Communication Orientation and Goal Orientation by 1 unit in each case, had a corresponding change of project performance by 1.11 and 1.16 respectively. The researcher however failed to establish any correlation between Human Orientation and project performance and concluded that there was no direct impact of this attribute to the projects at the Authority. There was however limited evidence on its application across all the five management projects at the Authority, explaining in part the negative results.**

**The results depict that at 95% confidence level, Leadership Sponsorship, Communication Orientation and Goal Orientation are significant explanatory variables for any change in project performance. The coefficient of determination $(R)^2$ of the univariate Chi-square Analysis of the results, explaining the magnitude. Interpreting the results Leadership Sponsorship explains 97% of any change in Project Performance, while Communication Orientation explains 89% of any change in Project Performance and Goal Orientation explaining 89% of any change in Project Performance. The remaining 3 % - 11 % of change in the dependent variable (Project performance) respectively, is explained by other factors not measured by this study.**

**The study concluded that the most successful projects within the Authority, where those with a senior member of management, with sufficient authority on people, systems and funds who acted as a Sponsor. The sponsor communicated the vision of the project, motivated the team, resolved conflicts within the project and within the organization, while reinforcing change, and building the necessary coalitions to make this possible. Projects that were Goal Oriented had clearly defined the scope of the project, set a clear path project in terms of what needs to be achieved, and set project milestones. They had also a good focus on the smaller daily**

**goals and had ensured congruence amongst team members. Furthermore, the team members were action oriented in the sense that success was defined based on realization of very specific objectives, that were time bound. Finally Saddled between the two aspects as a critical success factor was Communication Orientation. It was evident from the study that the intent of leadership and the work plans of the project managers required an effective cascade to all project team members for realization of any tangible project results. Furthermore, Communication Orientation proved essential in addressing the group dynamics within a project and the management of all project stakeholders.**

**This study therefore recommends the adoption of the principle of Project Leadership Sponsorship and training of senior management members on this aspect. Furthermore, Goal Orientation and Communication Best Practices should be well documented and adopted in projects as means of improving performance. As a matter of fact, the development of a project management manual applying the principles in this study would be a great way to standardize these practices across all management projects.**

# CHAPTER ONE

# INTRODUCTION

## 1.1 Background to the Study

The issue of poor performance of projects is not new and so is the frustration of project proponents who include stakeholders and beneficiaries. (Ika,2012). This issue of displeasure with project results and performance has roots that going back to the 1950s (Take the example of John Kennedy's speech to Congress in 1961). McKinsey-Devex, in a study done in 2013, opine that 64% of donor-funded projects are unsuccessful (Hekala, 2012). Looking at the example of the World Bank, one organization with a good project monitoring and evaluation system, a study by the United States Meltzer Commission (2000) established that more than 50% of the World Bank's various projects had failed. This is besides the fact that the investment in projects has been to the tune of more than US$5 billion, and is spread over 700 projects in Africa, over a period of 20 years in the past. (Dugger, 2007). In another study, The Independent Evaluation Group (IEG), rating independently claimed that, in 2010, 39% of World Bank projects were unsuccessful (Chauvet et al., 2010). Besides other agencies and donor countries performance has been met with similar failure. (Associated Press, 2007)

For more than three decades, project management enthusiasts and scholars have sought to explain project success. Hughes (1986), carried out a survey, he interrogated factors that impacted project performance. In his findings, he drew the conclusion that projects failure can be traced to inadequate management system, lack of congruence between rewards and actions and poor communication of goals. On the hand Hawk (2006), critical success factors in projects should be identified and duplicated as a sure way of improving project performance as opposed to investing huge resources in understanding project failure which, he opines, fails to assure success in the future.

Leaders occupy a very unique position in management of projects. Their responsibilities are directed outwards; towards team performance, strategy development, results and the like yet their influence comes from within themselves; who leaders are, the relationship they create and the behaviour they practice.( Avolio and Brass, 2006)

The principle roles of project team leadership include leading, planning, organizing and coordinating (Smith and Wilkins, 1996). How leader motivates people to act beyond the letter of their jobs is very critical. Leadership dimensions are about inspiring, influencing, challenging and engaging. Influencing leadership creates the fundamental credibility and principled action essential for forming relationships. Engaging leadership on the other side weaves relationships ensuring understanding and mutual respect. Inspiring leadership is about propelling these relationships towards a better future. Challenging leadership breaks paradigms that get along the way. (Avolio and Brass, 2006).

Good relationship amongst supervisors and their subordinates drives job satisfaction (Chen & Tjosvold, 2006).To nature great relationships, supervisors and subordinates must engage in open and sustained discourse in the workplace. Shop floor workers, bear information and suggestions from where top management can tap to inform their decision making processes . It follows therefore, that supervisors acting together with their subordinates and receptively taking their suggestions, engender the subordinates' morale and self- belief, and ultimately yield greater Job satisfaction (Marcus & House, 1973).

Conflict can be traced to differences in perception, opinion, or beliefs amongst people. It can be taken that conflict occurs when there is lack of congruence in aims, thought process, or feelings engendering friction and disagreements amongst the people.(Villax & Anantatmula, 2010). It's more of People rather than process and procedures that play the biggest role in the engendering dysfunctional conflict (Gardiner & Simmons, 1998). In any case, Personal differences stem out of people drawn from different cultures having to work collectively to achieve shared project goals. According to Lencioni (2002), conflict is of necessity for maturity and nurturing teams. Conflict is necessary, beneficial, and should be initiated by way of techniques such as mining where sensitive matters are fished out in a group for discussion; and real-time permission, where healthy debate are promoted. However , conflict must managed to prevent it from undermining project performance.

With regards to communication, it will be appreciated that at project commencement most contracting parties are new to each other . Development of trust therefore cannot be assumed. Communication is end up being the medium bringing members together, and enabler to information sharing. At the primary stages information pertaining to the project proponent

requirements, their priorities, constraints, the project aims and specifications, is key in establishing a framework for nurturing of mutual trust and understanding (Muller and Turner 2005). Furthermore , it can be considered that communication facilitates team members in a project setting voice grievances (Jarvenpaa and Leidner 1999). Knowledge sharing in a team fosters relationship (Pietroforte 1997). One can therefore conclude that enthusiastic communication is an indicator of health, enthusiasm and optimism within a project team. It is also important to note that the varying the frequency, mode and efficacy of communication will provoke varying responses (Santoro and Saparito 2003).

Goal orientation refers to preferences in achievement setting (Button, Matheu & Jazac, 1996; Payne, et.al., 2007). Usually large proportion of failures, arise at the construction phase, where myriads of factors not anticipated, may arise at the conception and design stages of the project (Chan and Kumaraswamy 1997). Bad management practices, lack of effective supervision, untimely or absent decisions and finally variations driven by project proponents can be cited as the most significant drivers of project non-performance (Trost and Oberlender 2003) Unfortunately, there is limited knowledge on how these factors and protocols work to guarantee that key stakeholders are managed effectively. Understanding the root causes and adopting correct techniques and devices to control these factors is crucial and be the answer to the quest for achieving success in project performance.

Skitmore and Wilcock (1994), In the United Kingdom surveyed 9 small construction firms to ascertain a number of key management decisions. In his findings, he gathered that the bulk of the decisions were based on experience, except for a small proportion in which the prescribed and detailed methods were deployed. The 5 principal causes of project failure amongst projects in Hong Kong was studied by Chan and Kumaraswamy (1997). Using a survey tool, that consist of 83 delay factors, grouped in 8 categories and distributed among 400 local firms they conducted a detailed study. With a 37% response, he established that the five most important contributors of project failure were weak field management supervision, besides delays in decision making, variations by project proponents, unforeseen conditions and finally design changes.

On the other hand, Project success or project performance is a summation of the criteria that measure project outcomes or deliverables. Initially and over a significant period of time, project success was measured from a constricted universally accepted criteria of time, scope and cost.

Over the years, this has now been expanded to include other criteria such as meeting strategic objectives and financial objectives of the enterprises and generally enveloped in stakeholder satisfaction.

Pinto and Slevin (1988) searched for a broader framework for project success. Postulating that project success was a result of both intrinsic(project) and extrinsic(proponents) factors. intrinsic(project) factors being time, cost, and performance all of which the project manager has substantial control over. extrinsic(proponents) factors being utility, gratification, and efficacy of the project outcome; regrettably, these factors cannot be assessed before the completion of the project; one can only guarantee them during project execution, up to a certain point, by way of comprehending client needs and transforming them into specifications of the project deliverables.

The discourse on project success, will gravitate around critical success factors (CSFs) of projects. In this case Critical success factors can be described as those key factors absolutely necessary to realizing the project goals (Rockart, 1982). According to Papke Shields, Beise, and Quan (2010) the complexity and costs of projects had dramatically peaked in the 10 years before their study. Quoting a survey by KPMG (KPMG, 2005) done among six hundred organizations across twenty-two countries in which project outcomes fell short of planned expectations, according to 86% of the respondents". In an even more recent survey, the Standish Group International appear to intimate that the project success percentage had dropped to 32 in the year 2009 from 34n in 2004.

In bringing it all together, project management seeks to effectively and efficiently utilize resources to deliver a project within time, scope, and cost. In this study, we consider the definitions of project success and selected four success criteria to include: time, cost, scope, and stakeholder satisfaction.

### 1.2 Statement of the Problem

More than half of projects do not succeed! A survey by the Standish Group International intimate that the project success percentage declined from 34 in 2004 to 32 in 2010 (Ika, 2012). The issue of poor performance of projects is not new and so is the frustration of project proponents who include stakeholders and beneficiaries. Understanding of influence of critical success factors to project performance would mitigate the problem. Weak leadership and lack of top management executives' sponsorship, conflict amongst project stakeholders, dysfunctional communication and

lack of clear goals and management system are some of the factors that have been attributed to project failure (Pinto and Slevin ,1988). It is against this background that the adoption of critical success factors during project implementation has begun gaining wide acceptance as a critical element of success in project performance.

The National Transport and Safety Authority, with funding from development partners is implementing 5 key strategic Management Projects to improve road transport services in Kenya. A recent McKinsey-Devex survey 2013, suggests that 64% of donor-funded projects fail (Hekala, 2012). Looking at the example of the World Bank, one organization with a good project monitoring and evaluation system, a survey by the United Stated of America Meltzer Commission (2000) found that more than 50% of the World Bank's various projects fail. The Independent Evaluation Group, in an independent rating, claimed that in 2010, 39% of World Bank projects were unsuccessful (Chauvet et al., 2010). Many more other agencies and donor countries have not registered any better results. (Associated Press, 2007).

### 1.3 Purpose of the Study

The purpose of this study was to establish the influence of Critical Success Factors on Project Performance on Management Projects of the National Transport and Safety Authority.

### 1.4 Research Objectives

1) To examine in what ways Leadership Sponsorship influence project performance
2) To assess how Human Relation Orientation influence project performance.
3) To establish in what ways Communication Orientation influence project performance.
4) To determine how Goal Orientation influence project performance.

### 1.5 Research Questions

1) To what extent does Leadership Sponsorship influence project performance?
2) To want extent does Human Relation Orientation influence project performance?
3) In what ways do Communication Orientation influence project performance?
4) In what ways does Goal Orientation influence project performance?

## 1.6 Significance of the Study

This study is important in understanding the influence of Critical Success Factors on project performance on management projects of the National Transport and Safety Authority. The Ministry of Transport and Infrastructure, as well as the Authority may benefit from findings of this study since as policy makers they can formulate and implement informed policies and management practices that will reduce the failure rate of future projects. This is crucial considering that many projects are funded by development partners. The development partners, such as the World Bank, The European Union, the Africa Development Bank and others may also benefit from the findings of this study. Understanding of the factors influencing project performance may inform the approaches that they use in their projects to make them more effective. The results of this study may also indirectly be of help to project team members as they will benefit from interventions by policy makers. Scholars might also benefit from this study as they may use its findings as reference in future studies.

## 1.7 Delimitation of the Study

There are many factors that could influence project performance of the management projects at the National Transport and Safety Authority. However, this study focused on four namely Leadership Sponsorship, Human Relations Orientation, Communication Orientation and Goal Orientation. The study covered the Authority in Kenya. It involved project team members and other key stakeholders.

## 1.8 Limitations of the Study

There were limitations experienced in data collection where some of the targeted respondents were unwilling to provide information. The information being sought was not always available or well understood by all the respondents. The researcher explained the purpose of the study and guaranteed to hold information provided in strict confidence. Focus group discussions with select project stakeholders helped with some of the project information which may not have been obvious to all respondents.

## 1.9 Assumptions of the Study

The assumptions of this study were: that the targeted respondents will be willing and will answer the questions asked truthfully and that the Authority will allow data collection in regard to their projects and offer all relevant information for this study and that there will be no significant change in NTSA projects activities that may affect the study before its completion.

## 1.10 Definition of Significant Terms

**Project Performance**: In this study, project performance will mean project success. The delivery of a project within budget, on time, to scope and to the satisfaction of stakeholders.

**Leadership Sponsorship:** In this study Leadership Sponsorship will refer to the practice of assigning a senior member of top management. Who dedicates considerable time and resources, to take overall leadership of a specific project.

**Human Relation Orientation**: In this study, Human Relation Orientation is the general positioning of the project to actively address issues relating to interactions of different project stakeholders focusing on creation of group synergy, conflict resolution and change management.

**Communication Orientation**: In this study Communication Orientation refers to the general positioning of the project to effectively and strategically communicate objectives and progress to the project stakeholders.

**Goal Orientation**: In this Study Goal Orientation means driving the project through use of clear procedures, process and systems with the focus being daily achievements, periodic milestones and overall timely execution and delivery of the tasks in a measurable and easily communicable manner.

## 1.11 Organization of the Study

This study is organized in five chapters. The first chapter is a layout of the study that describes contextual and conceptual background of the study. The first chapter defines the problem and outlines the set objectives. The second chapter covers review of relevant literature. It presents the conceptual framework and establishes research gaps from literature reviewed. The third chapter details the methods and procedures that were used to achieve the set objectives. It comprises of

the research design, population, sampling, data collection and data analysis methods. The fourth chapter presents data analysis, presentation and interpretation of the study findings. The fifth chapter presents the summary of study, discussion, conclusions and recommendations.

# CHAPTER TWO

# LITERATURE REVIEW

## 2.1 Introduction

This chapter covers review of relevant literature on the four variables of the study. They include Leadership Sponsorship, Human relation Orientation, Communication Orientation, Goal Orientation in relation to Project Performance. It also presents the conceptual framework of the study.

## 2.2 The concept of Project Performance

The issue of poor performance of projects is not new and so is the frustration of project proponents who include stakeholders and beneficiaries. (Ika,2012). This issue of displeasure with project results and performance has roots that going back to the 1950s (Take the example of John Kennedy's speech to Congress in 1961). McKinsey-Devex, in a study done in 2013, opine that 64% of donor-funded projects are unsuccessful (Hekala, 2012). Looking at the example of the World Bank, one organization with a good project monitoring and evaluation system, a study by the United States Meltzer Commission (2000) established that more than 50% of the World Bank's various projects had failed. The Independent Evaluation Group (IEG), in an independent rating, claimed that in 2010, 39% of World Bank projects were unsuccessful (Chauvet et al., 2010). This is besides the fact that the investment in projects has been to the tune of more than US$5 billion, and is spread over 700 projects in Africa, over a period of 20 years in the past. (Dugger, 2007). Besides other agencies and donor countries performance has been met with similar failure. (Associated Press, 2007)

For more than three decades, project management enthusiasts and scholars have sought to explain project success. Hughes (1986), carried out a survey seeking to study the factors that affect project performance. In his findings, he drew the conclusion that projects failure can be traced to failure to implement management system, rewarding the wrong actions and limited communication of goals. According to Hawk (2006), critical success factors in projects should be identified and

duplicated as a sure way of improving project performance as opposed to investing huge resources in understanding project failure which, he opines, fails to assure success in the future.

Dvir *et al (*1988) intimates that project success factors are not unanimous for all projects. It is necessary, he opines, that project specific approach is more ideal in future studies into the practice and theory of project management (Hyvari 2005).

**2.3 Project Leadership Sponsorship and Project Performance**

Leaders occupy a very unique position in management of projects. Their responsibilities are directed outwards; towards team performance, strategy development, results and the like yet their influence comes from within themselves; who leaders are, the relationship they create and the behaviour they practice.( Avolio and Brass, 2006)

The principle roles of project team leadership include leading, planning, organizing and coordinating (Smith and Wilkins, 1996). In the case of contracted out management projects ,the contractor need to have a precise understanding of the Client's brief and be considerate of the business and cultural aspects of the company (Deakin, 1999).

How leader motivates people to act beyond the letter of their jobs is very critical. Leadership dimensions are about inspiring, influencing, challenging and engaging. Influencing leadership creates the fundamental credibility and principled action essential for forming relationships. Engaging leadership on the other side weaves relationships ensuring understanding and mutual respect. Inspiring leadership is about propelling these relationships towards a better future. Challenging leadership breaks paradigms that get along the way. (Avolio and Brass, 2006).

The traditional skills for an effective project team leader will comprise of a good grasp of technical and social skills relating to the project (Hauschildt et al., 2000). In contemporary times adaptability to change has become a preliqisite skill necessary in coping with persistent and rapid change of technology, policy, markets, regulations and socio-economic factors (Hemlin, 1999). Furthermore, Management Projects are known for disruptive innovation or change. Without the coordination and support of all project stakeholders, the success of the management projects cannot assured. The team leaders must effectively delegate their authority to help speed up decision making and implementation (Munns and Bjeirmi, 1996).

Henderson (2008) established that a project leader's competencies in decoding and encoding communication was a significant factor to team member satisfaction and productivity. In the literature, Zhang(2011), brought to the limelight the value of project leader communication, in which he posited the necessity of two-way communication as a risk management tool risks; Yasin, in projects. Gomes, and Miller (2009) observed leadership and communication and reports the same while Rivard and Dupré (2009) submitted that great stakeholder relations was driven by strong communication.

### 2.4 Human Orientation and Project Performance

Good relationship amongst supervisors and their subordinates drives job satisfaction (Chen & Tjosvold, 2006).To nature great relationships, supervisors and subordinates must engage in open and sustained discourse in the workplace. Shop floor workers, bear information and suggestions from where top management can tap to inform their decision making processes . It follows therefore, that supervisors acting together with their subordinates and receptively taking their suggestions, engender the subordinates' morale and self- belief, and ultimately yield greater Job fulfillment (Marcus & House, 1973). According to Johlken and Duhan (2000), accepting propositions by low cadre staff imply that a supervisor is attentive, is a sign of friendliness and leads to better communication between the two parties as well as job fulfillment (Kim, 2009).

Conflict can be traced to differences in perception, opinion, or beliefs amongst people. It can be taken that conflict occurs when there is lack of congruence in thoughts, feelings, goals amongst individuals with the result of friction (Villax and Anantatmula, 2010). 3 arguments have been advanced concerning conflicts in projects (Robbins & Stuart-Kotze ,1986 ; Robbins, 1974, 1979). There is a traditional view that calls for the promotion of the culture of peace and harmony in projects. Managers are expected to drive this, yet there is also the behavioral view, that consider conflict as a way of life. A negative attribute which cannot be eliminated. Managers are expected to live with it and simply put 'manage conflict'. Lastly there the interactionist perspective that considers conflict as a driver of performance. Teams must conflict to get to a point of unleashing the performance soft spot. Too little conflict, they opine, may mean reduced innovation, low level of change, as well as limited improvements for the organization. It's more of People rather than process and procedures that play the biggest role in the engendering dysfunctional conflict (Gardiner & Simmons, 1998). According to Lencioni (2002), conflict is of necessity for maturity

and nurturing teams. Conflict is necessary, beneficial, and should be initiated by way of techniques such as mining where sensitive matters are fished out in a group for discussion; and real-time permission, where healthy debate are promoted. However , conflict must managed to prevent it from undermining project performance.

### 2.5 Communication Orientation and Project Performance.

Communication has been defined as a 2-way process with a sender(s) and a receiver(s) and a media providing a mean of interaction.(Cleland and Ireland 2002). Message is relayed by the sender to the receiver(s), who can be an individual , group or an entity (Baguley 1994). For communication to work , it cannot be a one-way or a unilateral process. (Thomas *et. al*. 1998).

With regards to communication, it will be appreciated that at project commencement most contracting parties are new to each other . Development of trust has to be worked on. Communication immediately becomes the medium that pools members together, it is an enabler of information sharing. At the initial stage, project objectives, clients specifications and needs, priorities and as well as limitations are crucial and must be well decoded to build a framework for generating mutual trust and understanding (Muller and Turner 2005). Besides communication facilitates project team members to air their grievances (Jarvenpaa and Leidner 1999). Knowledge distribution in a team fosters relationship (Pietroforte 1997). It is also important to note that the varying modes of communication media, their frequency, and also effectiveness will provoke varying responses (Santoro and Saparito 2003).

In the next section a linkage between goal orientation and project performance has been interrogated.

### 2.6 Goal orientation and Project Performance

Goal orientation refers to preferences in achievement setting (Button, Matheu & Jazac, 1996; Payne, et.al., 2007). Usually large proportion of failures, arise at the construction phase, where myriads of unforeseen factors are conceived during the conception and design stages (Chan and Kumaraswamy 1997). Bad management practices, lack of effective supervision, untimely or absent decisions and finally variations driven by project proponents can be cited as the most

significant drivers of project non-performance (Trost and Oberlender 2003) Unfortunately, there is no concrete appreciation of these factors and drivers amongst the key stakeholders, for effective management of projects. This therefore leaves the gap of determining the techniques, tools and procedures to be embraced to manage these factors and provide answers to the quest for achieving success in project performance.

While it is true that the drivers of project management are reasonably understood, there is little progress in management practices such as responsibility sharing and engagement among the project's stakeholders. Green (1989), in the United Kingdom, surveyed six firms to investigate their tendering practices and sought to find out the reasons for disregarding the best practices in the area of cost management. In his study he found that most firms were simply estimating cost, and while the rationality for estimating was appreciated and was even justifiable, there was a range of uncertainties associated with the wider environmental issues that had prevailed over the tendering process. Skitmore and Wilcock (1994), In the United Kingdom surveyed 9 small construction firms to ascertain a number of key management decisions. In his findings, he gathered most management decisions relied on experience, only a paltry amount adopted the prescribed methods. The most progressive measures combine the prescribed and subjective approaches to reach accurate management decisions. For example, statistically significant variability when incorporated in fields such as cost estimation in the program evaluation and review technique (PERT) has been established to build reliability estimates of subjective nature.

Chan and Kumaraswamy (1997), informed 5 principal causes of project failure amongst projects in Hong Kong, using a survey tool, that consist of 83 delay factors. After clustering them into 8 categories he spreads them among 400 local firms. With a 37% response, he established that the five most important contributors of project failure were weak field management supervision, besides delays in decision making, variations by project proponents, unforeseen conditions and finally design changes.

Pursuing a predictive model to be used as an early project performance dashboard, Trost and Oberlender (2003), while studying sixty-seven completed project worldwide and investigating forty-five potential cost drivers, employed regression and factor analysis modeling they arrived at the conclusion that primary process design and site requirements were the most important drivers of project performance. A crucial finding, despite the fact that the precise tools and

techniques that can be used to undertake a project evaluation with respected to project goals was not advanced in the study, thus rendering the work constrictive in the arena of measuring project performance drivers.

## 2.7 Project Performance

Project success, in its simplified form, is setting a criteria or a standard for measuring project deliverables. Initially and over a significant period of time, project success was measured from a constricted universally accepted criteria of time, scope and cost. Over the years, this has now been expanded to include other criteria such as meeting strategic objectives and financial objectives of the enterprises and generally enveloped in stakeholder satisfaction.

Pinto and Slevin (1988) searched for a broader framework for project success. Postulating that project success was a result of both intrinsic(project) and extrinsic(proponents) factors. intrinsic(project) factors being time, cost, and performance all of which the project manager has substantial control over. extrinsic(proponents) factors being utility, gratification, and efficacy of the project outcome; regrettably, these factors cannot be assessed before the completion of the project; one can only guarantee them during project execution, up to a certain point, by way of comprehending client needs and transforming them into specifications of the project deliverables.

The discourse on project success, will gravitate around critical success factors (CSFs) of projects. In this case Critical success factors can be described as those key factors absolutely necessary to realizing the project goals (Rockart, 1982). Notably, despite the chance for occasional review, critical success factors are largely static (Nuland, Broux, Grets, De Cleyn, Legrand, Majoor, & Vleminckx, 1999). Rad and Anantatmula (2010) proposed three areas of project success in which they picked project meeting cost, duration targets, and achieving strategic and financial objectives of the enterprise.

Project success is evolving over the project life. There is therefore some uncertainty on this subject therefore. Jugdev and Thomas (2002) opine that managing expectations is what projects are all about; The perceptions of success, suggesting that project success is beyond the issue of bearing a common mission and the ability to excel in the project.

Shenhar, Levy, and Dvir's (1997) argued about advancing new ways of examining project success revolving around time. There are short terms issues such as the design goals, impact to customer dimensions and the like yet benefit to the organization is a long term issue and so is preparing for the future dimensions. Baker, Fisher, and Murphy (1988) separately, found out that the level of customer success was telling of a projects success.

According to Papke Shields, Beise, and Quan (2010) the complexity and costs of projects had dramatically peaked in the 10 years before their study. Quoting a survey by KPMG (KPMG, 2005) done among six hundred organizations across twenty-two countries in which project outcomes fell short of planned expectations, according to 86% of the respondents". In an even more recent survey, the Standish Group International appear to intimate that the project success percentage had dropped to 32 in the year 2009 from 34n in 2004

In bringing it all together, project management seeks to effectively and efficiently utilize resources for delivery of project meeting time, scope, and cost expectations. In this study, we consider the definitions of project success and selected four success criteria to include: time, cost, scope, and stakeholder satisfaction.

Considering the literature review discussed in this section as well as the propositions made, I now present the theoretical framework and model in the next section.

**2.8 Theoretical Framework; The Goal Orientation Theory**

In attempting to evaluate the critical success factors in project performance, this study looks at The goal orientation theory, according to Pedro and Luis (2002) , individuals do hold personal beliefs regarding intelligence and consider it to be incremental as the case of learning orientation or stable as is the case in Performance Orientation. Such believes as held by Pedro and Luis(2002), develop a framework which is mental and postulate that individuals adapt either avoidance or mastery strategies towards performance and goal achievement as established by Button, Matheu & Jazac(1996);Dweck & legget(1988) and VandeWalle( 2001).

Farr, Hoffman and Rangenbach (1993) content that goal orientation is a framework of cognitive nature, that is used to interpret feedback, reacting to challenges in goal attainment and responding to performance outcomes. Goal orientation scholars have identified the existence of two

dimensions which they have named learning and performance orientation. (Dweck,1986).Whereas learning orientation focus on task mastery where success is understood in terms of learning, this study will focus on performance orientation, which according to Lameez and Daan(2014) entails wanting to do well compared with others or within normative standards and risk of failure is discouraged. Elliot & Harackiewicz (1996) and VandeWalle (1997) further differentiated performance orientation into prove and avoid orientations where in one case there is a desire to demonstrate competence and attain favorable judgment of ability, while in the other case there is a desire to avoid demonstrating incompetence and unfavorable judgment. Chen and Mathieu (2008) observed that performance oriented individuals frequently engaged in low risk situations as compared to the learning oriented. Such individuals are unwilling to perform challenging tasks because they believe them to be more prone to errors and failures. The nature of Management Projects is a great room for flexibility allowing for innovation and hence a natural fit for learning oriented individuals and may cause frustration to performance oriented individuals.

Goal orientation according to Button et.al. (1996) and Payne et.al. (2007) manifest as stable traits and as situationally induced status. Lameez and Daan (2014), while noting the work of Salas & Fiore (2004), postulated that team effort are more likely to be effective when they are guided by a shared understanding and noted that shared goal orientations should be no exception in this respect. This research also suggest that influences resulting in such shared understanding are more conducive to successful team performance than influences directly targeting behaviour because an understanding of the reason underlying required actions allows people to respond more proactively and unmonitored to situational demands than behavioural instructions not supported by an underlying understanding of the reasons for these actions (van Knippenberg, van Ginkel, & Homan, 2013).

Dragoni and Kuenzi's, 2012 analysis of leadership influence on team goal orientation suggests that convergence into shared goals orientation may be quite common. This is backed also by Lameez and Daan(2014). When members differ in their openness to the goals advocated by the leader, debate inspired by such differences can be conducive to creating a shared understanding of goal, priorities, especially when guided by a leader who encourages team flexibility. West (1996), define team flexivity as a process of collective reflection on and adaptation of the team objective,

strategies and process. According to West (2002), this may lead members to arrive at a shared understanding of goal priorities and goal-directed behavior.

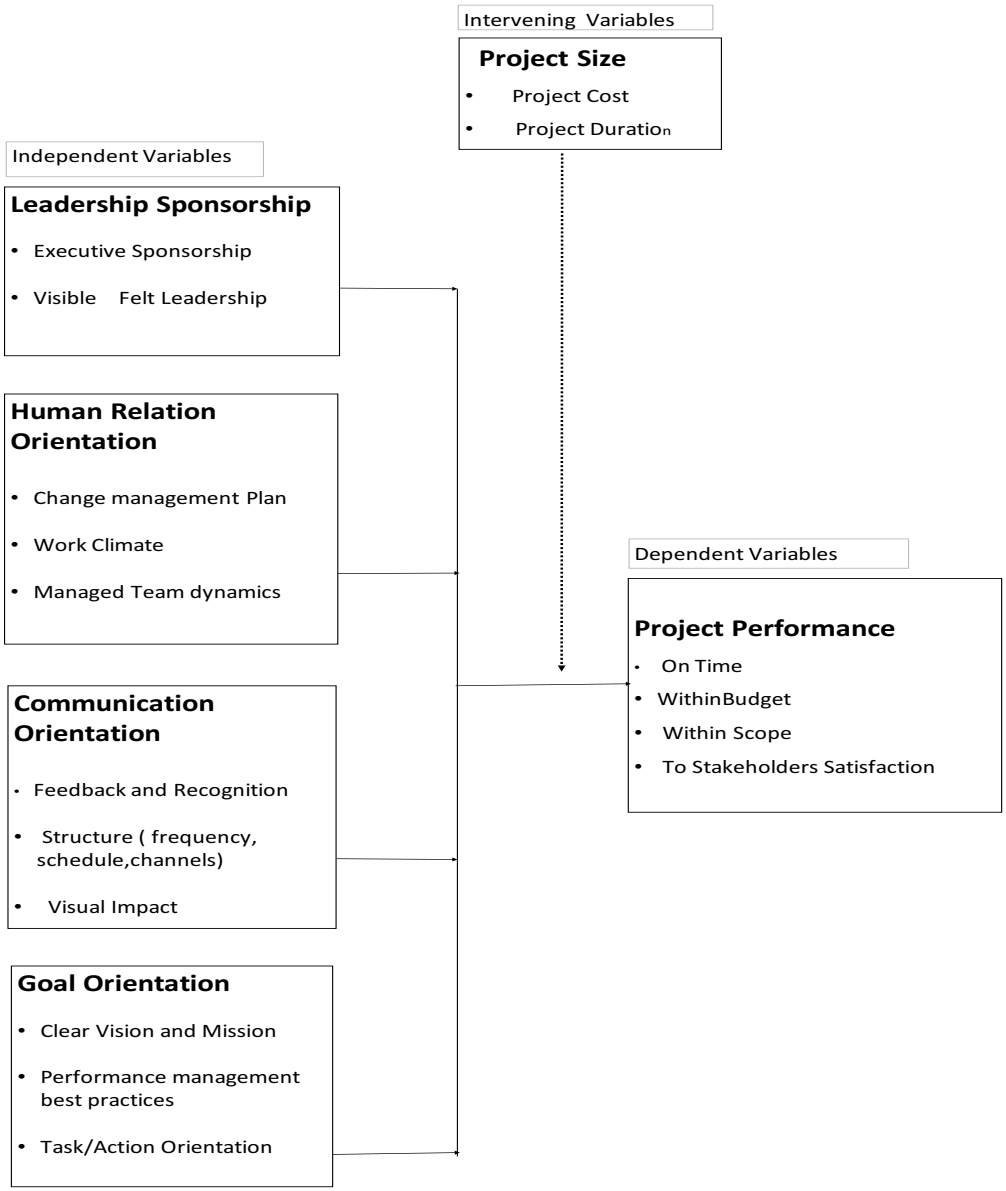
### 2.9 Research Gap

Few studies have focused on modelling project success factors as a means of predicting project performance. Those that cited the critical success factors in relation to project performance focused on very broad array of factors and were modelled differently. None of the studies modelled these factors into the four dimensions adopted in this study. Most studies on project management focused on construction projects with very few looking at Management Projects. Most of these studies have been conducted outside Kenya. Kenya has different social demographic characteristics from other countries. It is therefore important to understand the influence of critical success factors, as grouped by the researcher, on the Management Projects of the National Transport and Safety Authority.

### 2.10 The Conceptual framework

In this study, project performance, has been taken as a depended variable which is influenced by on three independent variables which are communication Orientation, Human Orientation and Goal orientation, with the Project size as the moderating factor as presented in the figure below.

**Figure 1: The conceptual Framework**



# CHAPTER THREE

# RESEARCH METHODOLOGY

## 3.1 Introduction

This chapter presents the research methods and procedures that was used in this study to achieve the set objectives. It entails research design, the target population and the sampling procedure as well as the methods of data collection and finally data analysis.

## 3.2 Research Design

In this study a cross-sectional survey research design has been used, owing to its ability to allow quantitative and qualitative data from a large population. Quantitative methods were used to collect and analyze data whereby closed ended questions in questionnaire will yield quantitative data. Qualitative methods were utilized to collect data such as in in-depth interviews, as well as open ended questions in questionnaires. The two methods will be useful in triangulation of the study findings.

## 3.3 Target Population

In this study the target population was all the employees of the National Transport and Safety Authority, working across five directorates, and are participants and project members in the various projects by the Authority. The target population of this study therefore was 325 (NTSA,2015).

## 3.4 Sampling Procedure

The study used systematic random sampling to select 10% of the target population to take part in the study. Kothari (2004) recommends that 10-30% of the target population is representative of the target population. The sampling frame was obtained from employees of the National Transport and Safety Authority, working across 5 directorates, and are participants and project members in the various projects by the Authority, where 30% of the project participants will be selected for

this study. Thirty percent of 325 is 100 respondents as recommended by Kothari (2004). The sample size for this study was therefore be 100 respondents. Every third project participant on any work location visited was recruited to participate in the study. The first respondent was selected purposively. The sample was purposely stratified to include 1 senior executive/project sponsor, 1 project manager, several Project supervisors and project team members. The response rate was 97%.

**Table 3.1 Sample Selection within 5 Management Projects at the National Transport and Safety Authority**.

| **Project Name** | **Directorate** | **Number of Project Team members to be sampled** |
|---|---|---|
| Transport Integrated Management Project (TIMS) | Information Technology | 20 |
| Short Term Intervention Plan Project (STIP) | Safety | 20 |
| New Driver Curriculum | Registration & Licensing | 20 |
| Motor Vehicle Inspection Improvement Project. | Technical | 20 |
| The 5 year Strategic Plan Development. | Corporate Support Services | 20 |
| **Total** | | **100** |

### 3.5 Methods of Data Collection

This study used two instruments to collect data. They included a questionnaire and an interview schedule. The questionnaire had 6 parts. The first part gathered data on social demographic characteristics of the respondents while the second collected information on Leadership Sponsorship. The third section collected information on Communication Orientation within the Project, while the fourth section gathered data on Human Relation Orientation in the Project. The fifth section of the questionnaire explored the subject of Goal orientation in a project and finally the sixth section interrogated Project Performance.

The interview schedule had guiding questions and probing questions along the five themes which are the focus of this study. In-depth interviews were administered to senior staff of the Authority participating in the projects as they had management information that was of use in this study by virtue of their position in the projects, as well as a few external stakeholders who were recipients in some of the projects to gauge some aspects of stakeholder satisfaction.

### 3.6 Validity of Research Instrument

Robinson (2002) cited validity as the degree to which the results generated from the analysis of the data represent the phenomenon being investigated. Validity was ensured by having objective questions included in the questionnaire. To ensure validity of the instrument, reviews and discussions were held with the supervisor. The supervisor was able to advice on the most appropriate indicators that measured the variables.

### 3.7 Reliability of Research Instrument

Reliability as advanced by Joppe (2000), is the extent to which a research instrument consistently produces similar results over time, is able to provide accurate representation of the total population being studied and generate similar results if the research is undertaken applying the same methodology over time. Golafshani (2003), while quoting Kirk & Miller (1986) identified 3 forms of reliability; equivalence which is the degree to which a measurement remains the same over repeated measurements, stability over time and finally internal consistency which is similarity of measurements within a given time period (internal consistency).

The test retest method was used to measure the reliability of the research instruments. A Sample of 10% of the population was used. After 1 week a repetition on the same sample was done. The reliability of the instruments was estimated by examining the consistency of the responses between the two tests. This was determined through the use of Karl Pearson's product moment correlation coefficient given by:

$$R = \frac{n\sum xy - \sum x \sum y}{n\sum x2 - (\sum x)^2][n\sum y2 - (\sum y)^2]}$$

Where

R = reliability coefficient

n = Number of respondents

x = Total score of the test administration

y = Total score of the retest administration

The test yielded a result of 0.98 which was interpreted to mean that the tool was highly reliable.

### 3.8 Data Collection Procedure

The researcher took the respondents through the questionnaire writing down the responses. This ensured that clarifications were given to the respondents where need arose. The questionnaires collected were then consolidated and cleaned in preparation for data analysis.

### 3.9 Methods of Data Analysis

Quantitative data was analyzed by use of descriptive and inferential statistics while descriptive statistics such as percentages, mean scores and standard deviation, were used to analyze quantitative data. Inferential statistics such as Pearson correlation coefficient and chi-square test was used to analyze quantitative data. Statistical Package for Social scientist (SPSS) was used as an aid in data analysis. Quantitative data analysis results were presented in tables.

To aid in getting the relationship between the Leadership Sponsorship, Communication Orientation, Human Relation Orientation and Goal Orientation and Project Performance, Correlation and regression was applied for the four research objectives.

The formulae used was: $\mathbf{P_1 = a_1 + b_1 L + \epsilon_1}$ , $\mathbf{P_2 = a_2 + b_2 R + \epsilon_2}$, $\mathbf{P_3 = a_3 + b_3 C + \epsilon_3}$ **and** $\mathbf{P_4 = a_4 + b_4 G + \epsilon_4}$

Where; $\mathbf{P_1}$, $\mathbf{P_2}$, $\mathbf{P_3}$ $\mathbf{P_4}$ is Project Performance , **L** is Leadership Sponsorship, **R** is Human Relation Orientation, **C** is Communication orientation and **G** is Goal Orientation strategy. $\mathbf{\epsilon_1}$, $\mathbf{\epsilon_2}$, $\mathbf{\epsilon_3}$, **and** $\mathbf{\epsilon_4}$ is the error term while $a_1$, $a_2$, $a_3$ & $a_4$ are constants ,with $\mathbf{b_1, b_2, b_3}$ **&** $\mathbf{b_4}$ being coefficients of variables.

Content analysis was used to analyze qualitative data. The responses from open ended questions in the questionnaire and interviews were categorized based on any emerging themes. The emerging themes were used to supplement quantitative data and make conclusions in the study.

### 3.10 Operational Definition of Variables

This study had four independent variables and one dependent variable. Leadership Sponsorship was measured by assignment of an executive sponsor in a project, The level of authority and Character of the Sponsor and the effectiveness of the Sponsorship/Leadership actions. Human Relation Orientation was measured by the existence of formal Change Management Strategy and Plan, the level of implementation of the Change Management Plan and team Cohesion, collective sense of purpose and action. On the other hand, Communication Orientation was measured by the existence of Project Communication Plan, adherence to schedule of meetings and communication and level of stakeholder awareness and appreciation of the project. Goal Orientation was measured by Level of clarity of project goal and scope, Identification of Milestones, and degree of resource allocation in line with work breakdown structures. Finally, Project Performance was measured by degree of implementation of project within Time, Budget and Scope

**Table 3.2 Operational Definition of Variables**

| Variable | Type | Indicators | Type of analysis | Scale of measurement |
|---|---|---|---|---|
| Leadership Sponsorship | Independent | • Executive Sponsorship<br>• Visible Felt Leadership<br>• Leadership communication | Descriptive statistics | Nominal<br>Ordinal |
| Human relation Orientation | Independent | • Change Management Plan.<br>• Work Climate.<br>• Managed team Dynamics. | Descriptive statistics | Nominal<br>Ordinal |
| Communication Orientation | Independent | • Feedback and Recognition<br>• Structure (frequency, schedule, channels)<br>• Visual Impact | Descriptive statistics | Nominal<br>Ordinal |
| Goal Orientation | Independent | • Clear Vision and Mission.<br>• Performance management Practices.<br>• Task/action Orientation | Descriptive statistics | Nominal<br>Ordinal |
| Project Performance | Dependent | • Within Budget<br>• Within Time<br>• Within Scope | Descriptive statistics<br>Inferential statistics | Nominal<br>Ordinal |

### 3.11 Ethical Considerations

The researcher sought approval and acquired a research permit from National Commission for Science, Technology and Innovation (NACOSTI). Furthermore, the researcher sought informed consent from the respondents. The respondents were requested not to indicate any identifying information in the questionnaire. Confidentiality was upheld throughout the study.

# CHAPTER FOUR

# DATA ANALYSIS, PRESENTATION AND INTERPRETATION

## 4.1 Introduction

In this chapter data analysis, presentation and interpretation of findings is made. Descriptive techniques including percentages, mean and standard deviation. The chapter is organized in sections according to objectives including determining the extent to which the critical success factors have impacted on project performance at the National Transport and Safety Authority. The study has sought to establishing the relationship between Leadership orientation, Relation orientation, Communication orientation and Goal orientation within a project and the performance. The chapter also presents inferential findings.

## 4.2 Analysis of Project Demographics

This section looked into demographic characteristics of the project. This factors were considered to be intervening on project performance. The two factors were budget size and Project duration as explained in the next section.

### 4.2.1 Project Budget

The Budget of the project was based on the initial the plan or estimates. Budget size had a correlation on the project size and complexity. The results are presented in table 4.1

**Table 4.1 Project Budget**

| | Frequency | Percent |
|---|---|---|
| Less than 100 | 20 | 20.6 |
| 100-300 | 19 | 19.6 |
| 301-500 | 19 | 19.6 |
| 501-999 | 19 | 19.6 |

| | | |
|---|---|---|
| More than 1,000 | 20 | 20.6 |
| Total | 97 | 100 |

From Table 4.1 , the finding is that 20% of the responses received were from projects that were either less than Kshs.100 million or More than 1 billion shillings. There was even distribution of responses across projects that were in the other 3 categories and were between 1 billion and 100 million shillings as presented in the table above.

### 4.2.2 Project Duration

The planned duration of a project had a direct relationship with the complexity of the project. Project with longer delivery periods demonstrated greater team dynamics and has more change management issues to grapple with. The findings of the study with regard to the variability of the length of the project schedules is depicted in table 4.2 below.

**Table 4.2 Project Duration**

| Duration | Frequency | Percent |
|---|---|---|
| Within 6 months | 20 | 20.6 |
| Within 1 year | 19 | 19.6 |
| Within 2 years | 19 | 19.6 |
| Within 3 years | 19 | 19.6 |
| More than 3 years | 20 | 20.6 |
| Total | 97.0 | 100 |

From the findings in table 4.2, there was an even distribution of projects from those with a period as low as 6 months to those exceeding 3 years. In each case between 19-21% of the respondents were members drawn from the respective projects.

### 4.3 Leadership Sponsorship in Projects

Leadership Sponsorship was measured using 10 characteristics. These were existence of an executive sponsor, the authority of the sponsor, ability to negotiate, build coalitions, lead, communicate project vision, mission and goals. The researcher was interested in the management behaviour of the project leader with regard to creating project awareness, reinforcing change and visibility felt leadership. The results are tabulated in Table 4.3 below.

**Table 4.3 Leadership Sponsorship**

| | Mean | Std. Deviation |
|---|---|---|
| Project has an Executive Sponsor | 3.8 | 1.0 |
| Sponsor has sufficient Authority ( People, Process, Systems, funds) | 3.6 | 1.0 |
| Sponsor builds coalitions | 3.5 | 1.0 |
| Sponsor actively participates In Project | 3.9 | 1.1 |
| Sponsor create project awareness | 3.7 | 1.2 |
| Priorities set and communicated | 3.5 | 1.2 |
| Leader visibility reinforces change | 3.6 | 1.2 |
| Sponsor is a strong leader | 3.6 | 1.2 |
| Sponsor treats each individual uniquely | 3.7 | 1.2 |
| Sponsor is a strong negotiator | 3.7 | 1.2 |

From Table 4.2, the researcher found moderate application of the principles of good leadership in projects management at the Authority. The responses from the participants, had means between 3.5-3.9 against a best score of 5.0. This meant that in majority of the projects the respondents were either moderately or to a great extent agreeing that the 10 Leadership Sponsorship characteristics were being exhibited in the projects. The results as tabulated in 4.2 above, further revealed that there was a general adoption of the idea of an executive sponsor for individual projects. The score was 3.7. Majority of the respondents agreed to a great extent (3.9) that the said sponsors were actively involved in the projects. However, in most cases, there was not enough leadership effort (3.5) to communicate clear project priorities and build coalitions with key stakeholders to ensure the projects receive the needed support and are insulated from threats occasioned by opponents. The standard deviation ranges of 1.0-1.2 meant that some projects reported the greatest level of fulfilment of the Leadership Sponsorship characteristics will some were to a less extent fulfilling them.

### 4.4 Human Relation Orientation in Projects

Human Relation Orientation was measured using 9 characteristics which related to change management best practices. The researcher was interested in investigation the existence of structured management processes that include a change management strategy, a change assessment, existence of a change organization, and an action plan to manage anticipated areas of resistance to the project. The characteristics of Human Orientation and the results are presented in table 4.4 below.

**Table 4.4 Human Relation Orientation in Projects**

| | Mean | Std. Deviation |
|---|---|---|
| Structured change management approach has been adopted | 2.6 | 1.0 |
| Assessment of change has been completed | 2.3 | 0.9 |

| | | |
|---|---|---|
| Assessment of organization readiness has been done | 2.2 | 1.0 |
| Anticipated areas of resistance have been identified & treated | 2.0 | 1.0 |
| Change management strategy is in place | 2.2 | 1.0 |
| Change management team members have been identified & trained | 2.2 | 1.0 |
| Strength of sponsorship coalition has been assessed | 2.1 | 1.1 |
| Change management plans are in place | 2.0 | 1.1 |
| There is Strong sense of purpose/collective sense of mission | 2.5 | 1.1 |

As depicted in Table 4.4 above, from the findings, the researchers observed that the performance of the projects with regard to the 9 characteristics of Human Relation Orientation in projects, averaged 2.0-2.6 with a standard deviation between 0.9-1.1. The researcher inferred that most of the participants agreed only to a less or moderate extent that these attributes were present within the projects. As depicted in the Table 4.4, the area which showed the least level of preparedness was the anticipation and treatment of areas of resistance. There was also low level of development of change management plans with only a score of 2.1. However, having a strong sense of purpose and collective sense of mission was the high-test scored attribute promoting Human Relation Orientation in projects, at a score of 2.6 and a standard deviation of 1.1.

### 4.5 Communication Orientation in Projects

Communication Orientation was measured using 10 characteristics which related to change management best practices. The researcher was interested in investigation the existence of the following characteristics: If the Projects had a defined objective, whether meetings were scheduled or ad-hoc and if public recognition of achievement by project team members did occur. The study

further sought to find out whether the milestone celebrations took place, if feedback by supervisors was Positive, whether shortfalls were clearly pointed out and If supervisor's guidance was viewed by team members as being positive. Finally, the researcher sought to establish, whether stakeholder communication was structured & regular, if Visual display of key performance indicators was practices and if there was a general sense of awareness & appreciation of project. The results are tabulated below in table 4.5.

**Table 4.5 Communication Orientation in Projects**

| | Mean | Std. Deviation |
|---|---|---|
| Project has an objective | 3.7 | 1.0 |
| Meetings are Scheduled | 3.5 | 1.2 |
| Public recognition of achievement occurs | 3.0 | 1.1 |
| Milestone celebrations take Place | 3.3 | 1.1 |
| Feedback by supervisors is Positive | 3.4 | 1.2 |
| Shortfalls are clearly pointed Out | 3.4 | 1.2 |
| Supervisor's guidance is positive | 3.4 | 1.2 |
| Stakeholder communication is Structured & Regular | 3.5 | 1.2 |
| Visual display of key performance indicators | 3.0 | 1.2 |
| General sense of awareness & appreciation of project | 3.6 | 1.0 |

Based on the responses received**,** as depicted in Table 4.5**,** the researcher established that communication of the project objective was the highest attribute at 3.7, implying the project participants agreed to a great extent with the implementation of this aspect in projects. Most of the project members demonstrated a general sense of awareness and appreciation of the project. The score registered was 3.6. with a standard deviation of 1.0 There was however low level of public recognition of achievements and visual display of key performance indicators both having been rated at 3.0. depicting a moderate agreement amongst the project participants. In general, the researcher established that there were varying degree of Communication Orientation amongst the projects at the Authority and in section 4.8 has linked the performance of this indicator to project performance.

### 4.6 Goal Orientation of Projects

Goal Orientation was measured using 10 characteristics which related to project management systems. The researcher was interested in investigation the existence of the following characteristics: If the Projects end Is clearly defined, whether the scope was well defined and if there were specific objectives that defined project success. The study further sought to find out whether milestones are identified and Work breakdown (WB) Structure had been completed, if resources had been identified/acquired based of WB structure, whether periodic meeting to track progress took place and If the Project has an assigned Project Manager. Finally, the researchers sought to establish, whether the teams were action oriented meaning that their focus was on important priorities, and if the team was performance driven. The results are tabulated below in table 4.6

**Table 4.6 Goal Orientation**

| | Mean | Std. Deviation |
|---|---|---|
| Project end Is clearly defined | 3.9 | 0.9 |
| Scope is Defined | 3.8 | 1.0 |

| | | |
|---|---|---|
| Specific Objectives defines project success | 3.6 | 1.1 |
| Milestones are identified and a Schedule exist | 3.5 | 1.0 |
| Project has an assigned Project Manager | 3.9 | 0.9 |
| Work breakdown (WB) Structure completed | 3.1 | 1.2 |
| Resources identified/acquired based of WB structure | 3.2 | 1.1 |
| Periodic Meeting to track progress done | 3.3 | 1.2 |
| Team is action oriented/Focus is on important priorities | 3.3 | 1.1 |
| Team is Performance Driven | 3.5 | 1.1 |

As depicted in Table 4.6 the researcher established that most projects had a clearly defined end and has a person assigned as a manager. In both cases, they were rated at 3.9 with a standard deviation 0.9 and 1.0. However, completion of work breakdown structures was the poorest element of goal orientation amongst the projects evaluated with a score of 3.1. Consequently, there was evidence to demonstrate that allocation of resources to the project was not optimised based on work breakdown structures with a score of 3.2 and a standard deviation of 1.1. In general, the researcher established that there were varying degree of Goal Orientation amongst the projects at the Authority and in section 4.8 has linked the performance of this indicator to project performance.

### 4.7 Project Performance of the Projects

Project Performance was measured by 5 characteristics. These were the levels of adherence to project budget in expenditure, the execution of the works in line with the design specifications, the execution or delivery of the project within schedule and on time, the avoidance or limitation of changes to scope and the level of satisfaction of the project stakeholders with the project. The findings are tabulated in Table 4.7 below.

**Table 4.7 Project Performance**

| | Mean | Std. Deviation |
|---|---|---|
| Project within Budget | 3.3 | 1.2 |
| Works done to Specification | 3.6 | 1.1 |
| Completion is within expected Time | 3.3 | 1.4 |
| There has been minimum change to Scope | 3.5 | 1.2 |
| There is satisfaction of stakeholders | 3.1 | 1.4 |

From table 4.7, with regard project performance characteristics, there was agreement to a great extent, that works has been done to specification, with a score 3.6 and a standard deviation of 1.1. There was also agreement that there had been minimum change to scope for most of the projects, at 3.5. Despite the fact that most projects were completed in time and there was satisfaction for stakeholders, it was also evident that with a standard deviation of 1.4, some projects performed very poorly while others excelled in this area. To a moderate extent, there was agreement that projects had been completed within budget.

### 4.8 Regression Model

The researcher sought to evaluate the 4 independent variables (Leadership sponsorship, Human Relation Orientation, Communication Orientation and Goal Orientation) to the dependent variable

(project performance). Regression was used to test and measure the relationship between the kinds of variables. The researcher established the following relations:

$\mathbf{P_1 = a_1 + b_1 L + Є}$ , $\mathbf{P_2 = a_2 + b_2 R + Є}$ , $\mathbf{P_3 = a_3 + b_3 C + Є}$ **and** $\mathbf{P_4 = a_4 + b_4 G + Є}$

Where; $\mathbf{P_1}$ , $\mathbf{P_2}$ , $\mathbf{P_3}$ $\mathbf{P_4}$ is Project Performance , **L** is Leadership Sponsorship, **R** is Human Relation Orientation, **C** is Communication orientation and **G** is Goal Orientation strategy. $\mathbf{Є_1}$, $\mathbf{Є_2}$, $\mathbf{Є_3}$, **and** $\mathbf{Є_4}$ is the error term while $a_1$, $a_2$, $a_3$ & $a_4$ are constants ,with $\mathbf{b_1, b_2, b_3}$ **&** $\mathbf{b_4}$ being coefficients of variables. Upon testing the univariate models above, using Chi Square, the researcher has presented the findings table 4.8 below.

**Table 4.8 Correlation coefficients for model generation**

| | Standardized Coefficients | | | |
|---|---|---|---|---|
| | Constant | B | Beta | Sig |
| Leadership Sponsorship(L) | -19.8 | 33.4 | 1.29 | 0.008 |
| Human Relation Orientation (R) | 6.98 | 49 | 0.93 | 0.1 |
| Communication Orientation( C) | -6.02 | 43.7 | 1.11 | 0.034 |
| Goal Orientation(G) | -7.5 | 50.9 | 1.16 | 0.037 |

Given the original models were:

$\mathbf{P_1 = a_1 + b_1 L + Є}$ , $\mathbf{P_2 = a_2 + b_2 R + Є}$ , $\mathbf{P_3 = a_3 + b_3 C + Є}$ **and** $\mathbf{P_4 = a_4 + b_4 G + Є}$

In chi Square, the level of Sig. should be below 0.05 for the results to be accepted as bearing a direct correlation. Based on the findings on table 4.8, the significance of Human Relation

Orientation is 0.1 which presents a very high probability that the outcome could be due to chance. We therefore could not establish if there was a direct influence of project performance by this variable.

Leadership Orientation, Communication Orientation and Goal Orientation, as shown by table 4.8 had outcomes of 0.008, 0.034, 0.037. The researcher concluded that there was a relationship between the variables which was not by chance. The relationship was generated as:

**$P_1$= -19.8+ 1.29L+ Є, $P_2$= -6.02+ 1.11C+Є and $P_3$= -7.5+ 1.16G+Є**

From the model, with regard to Leadership Sponsorship, the constant value of -19.8 implies that index of -19.8 when coefficients for all variable factors are zero. The results also indicate that a change in one unit of leadership will lead to a 1.29 unit of project performance in the same direction. At the same time, change in communication and goal setting, by 1 unit in each, will result to a positive change in project performance by 1.11, 1.16 respectively. This is an indication that three of the four independent variables under investigation were positively related to the dependent variable (project performance).

### 4.9 Univariate R-Square

Univariate R-Square the level to which the independent variable contributed to the change of the dependent variable in the same direction, the researcher has tabulated on table 4.9 below the R square, which is a measure on what percentage of effect is due to a variable and how much is the contribution of others.

**Table 4.9 Univariate R-Square**

**Model Summary**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Change Statistics | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | R square Change | F change | df1 | df2 | Sig. F Change |
| $P_1$ | 0.99 | 0.98 | 0.97 | 2.19 | 0.98 | 119.9 | 573.8 | 9.5 | 0.008 |
| $P_2$ | 0.97 | 0.93 | 0.89 | 4.42 | 0.93 | 27.7 | 544.1 | 39.2 | 0.034 |
| $P_3$ | 0.96 | 0.92 | 0.89 | 4.6 | 0.92 | 25.5 | 540.98 | 42.4 | 0.037 |

a Predictors: (Constant) Leadership & Sponsorship ($P_1$), Communication orientation($P_2$), Goal Orientation($P_3$)

From Table 4.9, the model summary indicates that at 95% confidence level, Leadership Sponsorship is a significant explanatory variable for any change in project performance, the magnitude of which is explained by the coefficient of determination $(R)^{2.}$ From the results Leadership Sponsorship explains 97% of any change in project performance. The remaining 3 % is explained by other factors not captured in this model.

On the other hand, Communication Orientation is equally a significant explanatory variable for any change in project performance, the magnitude of which is explained by the coefficient of determination $(R)^2$. From the results Communication Orientation explains 89% of any change in project performance. The remaining 11 % is explained by other factors not captured in this model.

Finally, Goal Orientation is also a significant explanatory variable for any change in project performance, the magnitude of which is explained by the coefficient of determination $(R)^2$. From the results Goal Orientation explains 89% of any change in project performance. The remaining 11 % is explained by other factors not captured in this model as depicted on table 4.9.

# CHAPTER FIVE

# SUMMARY, DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

## 5.1 Introduction

This chapter presents summary of findings, conclusions and recommendations.

## 5.2 Summary of findings

The purpose of this study was to This study seeks to establish the influence of critical success factors on project performance of projects by the National Transport and Safety Authority, to establish in what ways Communication orientation influence project performance, to assess how human relation orientation influence project performance, to determine how goal orientation influence project performance, to examine in what ways Leadership Sponsorship influence project performance.The proposed research population was all project team members within 5 key projects undertaken by the Authority, one in each directorate.

Findings on what ways Leadership Sponsorship influenced project performance, showed a relatively weak application of the principles of good leadership in projects with means between 3.5-3.9 against a best score of 5.0. However, there was a general adoption of the idea of an executive sponsor on individual projects which stood at a score of 3.7. Majority of the respondents agreed that the said sponsors were actively involved in the projects. However, in most cases, there was not enough leadership effort (3.5) to communicate clear project priorities and build coalitions with key stakeholders to ensure the projects receive the needed support and are insulated from threats occasioned by opponents.

The researcher established that most projects had a clearly defined end and had a person assigned as a manager. In both cases, they were rated at 3.9 with a standard deviation 0.9 and 1.0. However, completion of work breakdown structures was the poorest element of goal orientation amongst the projects evaluated with a score of 3.1. Consequently, there was evidence to demonstrate that

allocation of resources to the project was not optimised based on work breakdown structures with a score of 3.2 and a standard deviation of 1.1

Regarding communication orientation in projects, the researcher established that communication of the project objective was the highest attribute at 3.7 and a standard deviation of 1.0. Most of the project members demonstrated a general sense of awareness and appreciation of the project at 3.6. There was however low level of public recognition of achievements and visual display of key performance indicators both having been rated at 3.0. The findings are further illustrated in the figure below.

From the findings, the projects registered a low level of Human orientation, averaging a range of 2.0-2.6 with a standard deviation between 0.9-1.1. The area which showed the least level of preparedness was the anticipation and treatment of areas of resistance. There was also low level of development of change management plans with only a score of 2.1. However, having a strong sense of purpose and collective sense of mission was the high-test scored attribute promoting Human orientation in projects, at a score of 2.6 and a standard deviation of 1.1.

From the findings, the projects registered a low level of Human Orientation, averaging a range of 2.0-2.6 with a standard deviation between 0.9-1.1. The area which showed the least level of preparedness was the anticipation and treatment of areas of resistance. There was also low level of development of change management plans with only a score of 2.1. However, having a strong sense of purpose and collective sense of mission was the high-test scored attribute promoting Human orientation in projects, at a score of 2.6 and a standard deviation of 1.1.

With regard to attributes that collectively amount to Performance of a project, there was agreement to a great extent, that works has been done to specification, with a score 3.6 and a standard deviation of 1.1. There was also agreement that there had been minimum change to scope for most of the projects, at 3.5. Despite the fact that most projects were completed in time and there was satisfaction for stakeholders, it was also evident that with a standard deviation of 1.4, some projects performed very poorly while others excelled in this area. To a moderate extent, there was agreement that projects had been completed within budget.

The Findings also revealed that project performance is determined by Leadership Sponsorship, Goal Orientation and Communication Orientation. This is explained by the fact that a change in

one unit of leadership will lead to a 1.29 unit of project performance in the same direction. At the same time, change in communication and goal setting, by 1 unit in each, will result to a positive change in project performance by 1.11, 1.16 respectively. With regard to Leadership Sponsorship, the constant value of -19.8 implies that index of -19.8 when coefficients for all variable factors are zero, while goal Orientation and Communication has indices of -7.5 and -6.02 respectively. This is an indication that three of the four independent variables under investigation were positively related to the dependent variable (Project Performance). The results also indicate that at 95% confidence level, Leadership Sponsorship is a significant explanatory variable for any change in project performance, the magnitude of which is explained by the coefficient of determination $(R)^2$. From the results Leadership Sponsorship explains 97% of any change in Project Performance. The remaining 3 % is explained by other factors not captured in this model.

On the other hand, Communication Orientation is equally a significant explanatory variable for any change in Project Performance, the magnitude of which is explained by the coefficient of determination $(R)^2$. From the results Communication Orientation explains 89% of any change in Project Performance. The remaining 11 % is explained by other factors not captured in this model.

Finally, Goal Orientation is also a significant explanatory variable for any change in project performance, the magnitude of which is explained by the coefficient of determination $(R)^2$. From the results Goal Orientation explains 89% of any change in Project Performance. The remaining 11 % is explained by other factors not captured in this model

**5.3 Discussion**

From the study, three of the four independent variables has an evident impact on project performance on projects at the Authority. The study established that the projects teams were constituted by putting together team members drawn from different departments and functions, and whose training and background was varied. Furthermore, majority had a second reporting line outside the project, and occasionally had conflicting objectives or priorities in their regular role from those of the project. Besides, there are cases where a projects potent a threat to the existing employees, and was perceived to be seeking to adversely change the way employees work and is some cases perceived to threaten jobs like was the case with the Authority's Strategic Plan project. Leadership Sponsorship of the projects, building an effective communication system and effective

goal setting proved to be the most important aspects in fostering effective implementation of projects.

The study also showed that the most successful projects within the Authority where those with a senior member of management, with sufficient authority on people, systems and funds who acted as the Project Leader and Sponsor. This role was perhaps the most critical role for the success of the projects, from ensuring that team members remained engaged on the project and were individually recognized and motivated. Furthermore, the Sponsor had a role of resolving conflicts within the project and within the organization, while communicating the vision of the project and reinforcing change, many times through building the necessary coalitions to make this possible.

Goal Orientation of projects was a critical success factor for projects within the Authority. This role was mainly driven by project managers who would help define the scope of the project, set a clear end of the project in terms of what needs to be achieved, and break this down in terms of project milestones, recognizing that when people from different professions work together on a team they tend to look or approach an issue from different points of views (Weatherley, 2006). Besides, on a periodic basis, often weekly, the managers would set out through a work breakdown structure the specific tasks to be achieved, while ensuring the critical path of the project and the interrelationship between various tasks and their influence on the project activities is respected and planned for. These would be posted as work plans and a methodology to track the progress and flag up any issues threatening the success of the project put in place. In a study by Granath and Hinnerson (2002) it was noted that although there is an agreement on the values and objectives of a project, there is a risk that these will change due to the project processes of today. A good goal setting process has to focus on the smaller daily goals and ensure congruence amongst team members. Furthermore, the team members had to be action oriented in the sense that success was defined based on realization of very specific things, at very specific time and within specification. The projects that demonstrated good observance of these practices, were evidently performing better in terms of delivery within budget, time and scope and had better satisfied stakeholders.

Saddled between a good work plan or strategy and a great leadership, was the project communication aspect. It was evident from the study that the intent of leadership and the work plans of the managers required an effective cascade to all project team members for realization of any tangible results. Communication Orientation was therefore established to be a critical success

factor in the projects undertaken by the Authority. Setting a clear agenda and ensuring that the team members in their diversity are clear on the project objective, was an important element within successful projects. The common techniques that proved successful in establishing effective communication with projects was having internally having scheduled and structured meetings while externally having a structured communication strategy for the external stakeholders. In the best cases, there was even a project communication newsletter, ensuring better understanding and appreciation of the project. Milestones were identified, there was a visual display tracking their achievement and whenever they were achieved, there was a clear system of celebrating while publicly recognizing both team and individual achievements. Learning to respect and trust one another's' respective role in the project and recognizing the risk inherent with those roles is important for team synergy and project success (Smith & Wilkins, 1996). This implies that clarifying project objectives and discussing the milestones among members is the most prevalent strategy applied by project team members within the Authority.

There was a nearly obvious correlation between the critical success factors set out for study in this project. This demonstrated the clear interrelationship between project performance and the critical success factors under study. It is however notable that there was limited correlation between Human Orientation and project performance. This aspect of project management which involved the application of formalized change management process, was the least applied across most of the projects studied. This perhaps explains the lack of correlation between this critical success factor and the performance of the projects of the Authority and presents an opportunity for further study.

### 5.4 Conclusion

The study concluded that project performance was influenced by Leadership Sponsorship, Communication Orientation and Goal Orientation. For every change in these independent variable, there was between 1.11 and 1.29 change on the depended variable in the same direction. The level of influence of the dependent variable was also greatly driven by the independent variables with between 89-97 % of the change being directly attributed to effect of the independent variable, while 3-11% was due to other factors which has not been studied. The study however failed to establish any direct relationship between Human Orientation and project performance. This aspect of project management which involved the application of formalized change management process,

was the least applied across most of the projects studied. This perhaps explains the lack of correlation between this critical success factor and the performance of the projects of the Authority.

From the study it is therefore possible to predict the level of performance of a project by evaluating the performance of the critical success factors. This study has added to the body of knowledge an important tool that can be used to drive up project performance. By building on these new knowledge project managers and investors can seek to drive project performance and improve the state of affairs so that more than the current 50% of projects can be completed successfully.

### 5.5 Recommendations

In the attempt to establish establish the influence of critical success factors on project performance of projects by the National Transport and Safety Authority, the researcher recommends that;

Though Leadership Sponsorship is employed to a great extent among the projects done by the Authority, Leadership courses should be incorporated in the training of senior Management members to enhance their skills to higher levels.

Goal setting and Communication Best Practices should be well documented and adopted across all Projects. As a matter of fact, the development of a project management manual would be a great way to standardize this practices.

### 5.5 Suggestions for further studies

Given the scope and limitations of this study, the researcher suggests the following for further studies:

A study should be performed, within other organizations, on the influence of critical success factors on project performance of projects for comparative purposes. This would enable the research to reach a more concrete conclusion;

Secondly, the scope of this study should be expanded to include other variables not identified in this study.

Finally, there is need to re-investigation the influence of Human orientation on Project Performance.

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# APPENDIX 1

# LETTER OF TRASMITTAL OF DATA COLLECTION INSTRUMENT

**National Transport and Safety Authority**

Telephone: +254-(020) 2729200
Fax: +254-(020) 2729200
Website: www.ntsa.go.ke

NGONG ROAD
TRANSCOM HOUSE
3RD FLOOR
P.O. Box 52692-00200
NAIROBI, KENYA

20th JULY 2015

ALL STAFF

**RE: ACADEMIC RESEARCH ON PROJECT PERFORMANCE**

For academic purposes, the named research shall be conducted within the Authority for the next 2 months. A questionnaire for that purpose is hereby attached. The research is being done in partial fulfillment of the requirements for the award of a Master's degree in Project Planning and Management of the University of Nairobi. Please note that this study is for academic purposes only and the information provided shall be held in strict confidence and shall be without consequences on part of the respondent. You are requested to offer the necessary assistance.

Yours Sincerely,

FOR: DIRECTOR GENERAL

# APPENDIX 2

# QUESTIONNAIRE

This questionnaire contains a set of 45 questions, made to evaluate the Influence of Critical Success Factors on Project Management within the Authority. The research is done in partial fulfillment of the requirements for the Award of a Master's degree in Project Planning and Management of the University of Nairobi. For each statement, please indicate by ticking the appropriate rating that describes your opinion based on your observation and knowledge of the management project in question. Please note that this inquiry is for academic purposes only and the information provided shall be held in strict confidence and shall be without consequences. Kindly provide your honest responses to the questions and thanks in advance for your time.

**PART A: DEMOGRAPHIC INFORMATION**

Department: _____

Designation of the Respondent: _____

**Management Project name _____**

Project Budget: _____

Original Schedule Period _____

**PART B: PROJECT LEADERSHIP SPONSORSHIP**

| | Leadership Sponsorship characteristics | Least extent | Less extent | Moderate | Great extent | Greatest extent |
|---|---|---|---|---|---|---|
| | Score | 1 | 2 | 3 | 4 | 5 |
| a) | The Project has an Executive Sponsor | | | | | |
| b) | The Executive Sponsor has the necessary authority on the people, processes and systems to authorize and fund the project | | | | | |
| c) | The executive Sponsor is willing and able to build a sponsorship coalition for change and is able to manage resistance from other managers and supervisors. | | | | | |
| d) | The Executive sponsor actively and visibly participates in the project team through the entire project. | | | | | |
| e) | The Executive sponsor builds awareness of the need for the project (why the project is happening) directly with the employees. | | | | | |
| f) | Priorities have been set and communicated regarding the project and other competing interests. | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| g) | The Sponsor visibly reinforces the change /project and celebrate success with the team and the organization. | | | | | |
| h) | The Project sponsor is a strong leader who demonstrates attributes such as inspiring, influencing, challenging and engaging others. | | | | | |
| i) | The executive sponsor treats others as individuals rather than just members of a group and consider individual as having different needs, abilities and aspiration from others. | | | | | |
| J) | The Project leader is a strong negotiator. | | | | | |

**PARTC: HUMAN RELATIONS ORIENTATION OF PROJECT TEAM**

| | Human Relation Orientation characteristics | Least extent | Less extent | Moderate | Great extent | Greatest extent |
|---|---|---|---|---|---|---|
| | Score | 1 | 2 | 3 | 4 | 5 |
| a) | A structured change management approach is applied in the project. | | | | | |
| b) | An assessment of change and its impact on the organization has been completed for the project. | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| c) | An assessment of the organization readiness for change has been completed for the project. | | | | | |
| d) | Anticipated areas of resistance have been identified in each project and special tactics developed to counter. | | | | | |
| e) | A change management strategy including the necessary sponsorship model and change management team mode has been created for the project. | | | | | |
| f) | Change Management team member in each project have been identified and trained. | | | | | |
| g) | An assessment of the strength of the sponsorship coalition for the project has been conducted. | | | | | |
| h) | Change management plans including communication, sponsorship, coaching, training and resistance management has been created for each project. | | | | | |
| i) | Feedback process have been established to gather information from each employee to determine how effectively the change is being adopted. | | | | | |
| J) | There is a strong sense of purpose and team members openly demonstrate a collective sense of mission. | | | | | |

**PART D: COMMUNICATION ORIENTATION OF THE PROJECT TEAM**

| | Communication Orientation characteristics | Least extent | Less extent | Moderate | Great extent | Greatest extent |
|---|---|---|---|---|---|---|
| | Score | 1 | 2 | 3 | 4 | 5 |
| a) | The Project organization has specific objectives that define success. | | | | | |
| b) | Periodic meetings are scheduled with the project team to track progress and resolve issues. | | | | | |
| c) | There is a consistent practice of publicly recognizing the contribution of others. | | | | | |
| d) | Management has put in place ways to celebrate the attainment of Milestones. | | | | | |
| e) | Managers and supervisors generally give positive feedback and recognition for good performance. | | | | | |
| f) | Shortfalls in attainment of goal are clearly pointed out, when someone would have done something better. | | | | | |
| g) | Supervisors give guidance in a way that causes others to want to improve. | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| h) | There is regular and structured communication to all project stakeholders. | | | | | |
| i) | Strong Visual displays on key performance indicators are conspicuously placed within the project organization, and are available to all project stakeholders. | | | | | |
| J) | There is a general sense of awareness and appreciation of the project within the organization. | | | | | |

**PART E: GOAL ORIENTATION OF THE PROJECT TEAM**

| | GOAL ORIENTATION characteristics | Least extent | Less extent | Moderate | Great extent | Greatest extent |
|---|---|---|---|---|---|---|
| | Score | 1 | 2 | 3 | 4 | 5 |
| a) | The project is clearly defined including what the change will look like and who is impacted by the change. | | | | | |
| b) | The project has a defined scope. | | | | | |
| c) | The project has a specific objective that define success. | | | | | |
| d) | The project milestones have been identified and a project schedule has been created. | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| e) | A project manager has been assigned to manage the project resource and task. | | | | | |
| f) | A work breakdown structure has been completed and deliverables identified. | | | | | |
| g) | Resources for the project team have been identified and acquired based on the breakdown structure. | | | | | |
| h) | Periodic meetings are scheduled with the project team to track progress and resolve issues. | | | | | |
| i) | The project team is action oriented meaning that there is a personal sense of urgency and focus on the most important priorities. | | | | | |
| J) | The project team cab be described as performance driven-delivering improvements with speed and excellence. | | | | | |

**PART F: PROJECT PERFORMANCE**

| | Project Performance Characteristics | Least extent | Less extent | Moderate | Great extent | Greatest extent |
|---|---|---|---|---|---|---|
| | Score | 1 | 2 | 3 | 4 | 5 |
| a) | Project Cost is within budget | | | | | |
| b) | The Works are as per Specification | | | | | |
| c) | The Project delivery is on Schedule | | | | | |
| d) | The Project has had minimum change of scope | | | | | |
| e) | There is a good level of Satisfaction of project Stakeholder | | | | | |

**Part F: OTHER FACTORS.**

From your past working experience in management projects, please specify any other factor(s) critical success factor that may influence project performance and provide your opinion below:

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