

**MAKERERE**



**UNIVERSITY**

**LEADERSHIP STYLE, TEAMWORK AND PERFORMANCE OF NATIONAL  
WATER AND SEWERAGE CORPORATION (NWSC) PROJECTS**

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**PLAN A**

**FEBRUARY, 2021**

## DECLARATION

I, Adong Olivia Betty hereby declare that the work presented in this dissertation is an original record of my work and has not been presented to any other institution of higher learning for any award.

Signature:  ..... Date: 15<sup>th</sup> / February / 2021 .....

**Adong Olivia Betty**

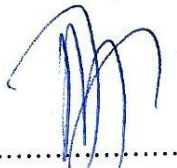
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## APPROVAL

This dissertation is submitted to Makerere University Business School with our approval.

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## **DEDICATION**

This dissertation is dedicated to my Parents Mr. and Mrs. Agama for enabling me attain a decent education and to my siblings for the unwavering support, prayers and encouragement.

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My utmost gratitude is to God Almighty for his grace and blessings that made it possible to complete this report. Further, I wish to express my appreciation to all those who contributed to the successful completion of this thesis.

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## **ABBREVIATIONS AND ACRONYMS**

GoU Government of Uganda

NWSC National Water and Sewerage Cooperation

## ABSTRACT

Project performance is essential for an organization to achieve its objectives. A successful project will ensure there is value for money and customer satisfaction. As much as National Water and Sewerage Corporation has put in efforts such as resource mobilization, internal controls and employee capacity building to equip them with the requisite skills, their performance has on several occasions remained below the expected standards as evidenced by delays in the completion of projects and failure to achieve set targets and inefficiency in service delivery. Besides, the impact of leadership styles and team work on project performance is scarcely known as the area remains under-studied in Uganda. This study sought to establish the relationship between leadership styles, teamwork and project performance of NWSC projects in Kampala. A quantitative approach was used to describe and draw inferences from the study findings. A sample size of 44 projects was considered to partake in the study. Structured questionnaires were used to collect data and this data was sorted, edited, coded and analyzed using SPSS Software. Descriptive frequency, Pearson correlation co-efficiency, and regression analysis statistics were used to examine the study variables. The correlation analysis revealed a significant positive relationship between leadership styles, team work and project performance. This implies that, all the two variables are directly associated with project performance. Multiple regression analysis revealed that team work was a better predictor of project performance, implying that team work has a greater influence on project performance. The study therefore concludes that project performance is indeed determined by the leadership style specifically transformational and transactional leadership. Once project leaders reinforce good leadership, there will be increased collaboration among employees, smooth communication and cohesiveness within projects. Strong teamwork leads to improved project performance. Therefore, to achieve better project performance, there is need to practice good leadership and encourage team work among employees. The study recommends that NWSC leaders should effectively communicate to their employees, motivate them to pursue a shared vision and engage in inspirational motivation through emotional support and encouragement. Similarly, team members should put in place systems to facilitate effective communication, monitoring and control of project activities in their teams. Additionally, management should learn that rewarding employees' efforts and awarding promotions for good work will promote employee commitment to the projects at hand. Innovativeness should also be promoted to enable others think about new ways of implementing projects and regular training of team members to empower them with necessary skills to carry out tasks effectively. Leaders should also focus on the project interests other than their personal interests and employees should always endeavor to meet agreed-upon standards and targets.

## **CHAPTER ONE**

### **1.1. INTRODUCTION**

This chapter presents the introduction to the study. It covers the background to the study, statement of the problem, purpose of the study, research objectives, research questions, significance of the study, scope and the conceptual framework

### **1.2. Background to the Study**

Globally, projects are recognized as a crucial part of strategic organizational management and their performance can lead to overall organizational development and success. This is because good performance of a project enables an organization to secure more funding from donors for other projects, it enables them maximize their profits as well as improve the image of their organization through recognitions of work well done. Performance is, however, a complex term for which no single agreed definition across several projects exists to date (Khan et al., 2014; Zhang & Fan, 2013). Its meaning is rarely defined clearly even when the main focus of the study is performance. Performance is often equated to effectiveness, efficiency, or success (Anantatmula, 2010; Humaidi & Asarani, 2012). Performance of projects in project management has been shown to be dependent on several factors including teamwork and leadership styles among others (Kariuki, 2015; Kerzner, 2017). Leadership style and teamwork are particularly central to project performance as it is from them that other factors can be derived (Chan et al., 2001; Kissi et al., 2013; Mishra et al., 2011; Muller & Turner, 2012; Wang et al., 2005).

Kariuki (2015) defines leadership as a process in which the leader solicits active participation of workers so as to attain set goals. The most commonly applied leadership styles in organizations today are within the school of visionary leadership theory, which entails transformational and transactional leadership styles (Anderson & Sun, 2017; Bass 1990;

Burns 1978). This is because they have proved to be most effective in attaining project success especially with the current generation (Arif & King, 2013). Therefore, a leader can be transformational or transactional depending on the situation (Bass, 1985). Several studies have theorized and tested the link between leadership style and performance (Higgs & Dulewicz, 2004; Keegan & Den Hartog, 2004; Keller, 1992; Prabhakar, 2005; Sunindijo et al., 2007). For example, Keller (1992) found a linkage between transformational leadership style and project performance where transformational leadership requires the leader to establish, communicate and motivate others to pursue a shared vision. It requires that a leader leads by example, be a role model for their teams, engage in inspirational motivation through emotional support and encouragement, recognize the uniqueness of every member and engage them in decision making all which are crucial for proper project performance (Bass & Riggio, 2006). Higgs and Dulewicz (2004) on the other hand established a preference for transactional leadership style for simple projects and transformational leadership style for complex projects. Transactional leadership is particularly useful when guiding and motivating individuals to complete their clearly defined tasks with minimal errors and involves the use of contingent reward behaviors for example provision of resources in exchange of excellent performance.

Teamwork on the other hand refers to the ability of project members to work efficiently as a team (Wang et al., 2005). It is regarded as a key contributor to project performance as it provides the means through which organizations are able to integrate a diversity of experts for successful completion of a project (Mendelsohn, 1998). Thus, teamwork is critical in the attainment of project objectives in that the responsibility of implementing various activities rests with project team members. Several studies suggest that the leadership style adopted can enhance the relationship among team members and their leaders as well as boost

communication (Bass & Avolio, 1994; Yammarino et al., 1998). Therefore, for a project to be successful, the project manager must adopt a leadership style that facilitates teamwork.

In a situation where there is no team work and a poor leadership style is employed, projects do not achieve the intended objectives. For instance, projects cannot be completed on time, within the stipulated budget and output will be of poor quality. For example, in 1998, National Water and Sewerage Corporation (NWSC) was considered to be an unhealthy corporation and most projects stalled as a result of managerial inefficiencies as doubts were expressed as to whether there was any leadership within the organization at all (Water Aid, 2003:1). In search for internal reforms, there was an introduction of a system whereby government did not interfere with the corporation's management. Furthermore, a Board of Directors was appointed to support management in creating strategies for a more desirable performance (Mugisha and Berg, 2017). NWSC had since made an immense transformation from being a highly inefficient body to a respectable, financially sustainable and efficient service provider. It was governed by effective, hardworking, committed and passionate leaders (Matta and Murphy, 2005:1-4).

In contrast however, recent project performances of the company may point towards inefficiencies in leadership and teamwork. A case in point is, during the implementation of the pipe laying projects from Wakiso Town Council to Kikubampanga Town Council, supervisors failed to address delays in payment of project staff which halted the construction activities. They failed to clearly communicate with the staff to discuss the pertinent issues leading to the lack of pay such as inadequate budgetary provisions for the project activities and limited sector funding (Ministry of Water and Environment, 2018). The staff agreed not to work until their arrears were settled. This resulted into pipe laying delays as was recorded in the 5,000m piped so far versus the required 6,200 m piping distance thus affecting the

completion timelines. The same can be seen in delays in the laying of main pipeline from SGS Kawanda to Matugga Tank, where the procurement and site staff were not working together to achieve a common goal. Communication was not synchronized and there was poor coordination of activities. This resulted in delays in the supply of piping material. Only 50% of this pipeline has so far been completed (Kampala Water, 2019).

Another case in point is the Kapeeka water supply project which was aimed at developing a new water supply system for Kapeeka town (NWSC, 2019). During the implementation of the works, NWSC recruited a clerk of works (CoW) for the day-to-day supervision. However, there was no inspection guideline that could guide the CoW on procedures. The posting instruction to the CoW did not contain any specific instructions on what to do, how to do it and when. This resulted in very poor record keeping as well as poor quality and process controls. This led to poor quality infrastructure, which did not perform to required expectations (OAG, 2017). It is against this background that this research focused on water projects in Kampala with the aim of investigating the relationship between leadership style, teamwork, and project performance in the implementation of several projects within the organization.

### **1.3. Statement of the Problem**

The increasing amount of project activities across different sectors and industries is one of the most significant trends in the world (Winter & Szczepanek, 2008). With project performance being dependent upon successful completion, the search for ways of enhancing project performance has been on for several years, which has led to identification of critical success factors (Assaf & Al-Hejji, 2006; Chan & Kumaraswamy, 1997). Despite this, poor project performance seems to be a universal phenomenon in various projects (Talukhaba, 1999; Assaf & Al-Hejji, 2006; Gichunge, 2000), including some of the projects implemented by



NWSC which have not been completed on time, experience budget overruns, and have compromised quality (NWSC, 2019).

Although several studies on leadership styles, teamwork and project performance have been undertaken globally, the area still remains under-studied in Uganda. While factors attributable to the performance of projects are known, the impact of leadership styles and teamwork on project performance is scarcely known with most researches concentrating on identification of causes of cost and time over-runs (Kariuki, 2015). For instance, Alinaitwe et al. (2013) investigated the causes of delay and cost overruns in Uganda's public sector construction projects, where they found that the five most important causes of overruns were changes in scope, delayed payments, poor monitoring and control and high inflation and interest rates. Muhwezi et al. (2014) on the other hand investigated the factors causing delays in Building construction projects in Uganda, and concluded that delays were attributed to mainly corruption tendencies by managers as well as other factors like consultant, contractor and client related delay factors. As seen in these cases, poor leadership and teamwork can affect overall project performance.

Moreover, the relationship between leadership style, teamwork and project performance is not well understood and appreciated in many organizations. Therefore, such a lack of information regarding the benefits of leadership styles and the importance of teamwork in project performance calls for a detailed study. If this is left unaddressed, many projects will continue to operate below expectations, thereby undermining their intended long-term aspirations. Thus, this study was undertaken to close the existing gap by specifically examining the relationship between leadership styles, team work, and project performance of NWSC projects in Kampala.

#### **1.4. Purpose of the Study**

The purpose of this study was to examine the relationship between leadership style, team work, and project performance of NWSC projects in Kampala.

#### **1.5. Research Objectives**

- (i) To examine the relationship between leadership style and project performance.
- (ii) To examine the relationship between leadership style and teamwork.
- (iii) To examine the relationship between teamwork and project performance.
- (iv) To examine the combined effect of leadership style and teamwork on project performance.

#### **1.6. Research Hypotheses**

Based on the research objectives and the conceptual framework, the null hypotheses for the study were as follows;

H1: There is no significant relationship between leadership style and project performance.

H2: There is no significant relationship between leadership style and teamwork.

H3: There is no significant relationship between teamwork and project performance.

H4: The joint effect of leadership style and teamwork on project performance is not significant.

#### **1.7. Significance of the Study**

The study contributes to highlighting the importance of the relationship between leadership style, teamwork, and project performance of projects in NWSC. Through this, the project leaders will be expected to adopt appropriate leadership styles that inspire teamwork to reduce time and cost over-runs during project execution.

To academicians and researchers, the study findings may act as a stimulus for further research in the area since project management is an emerging and dynamic field in research.

The study is useful to government, donors and other stakeholders that fund projects in developing policies and strategies to follow before funding the projects.

The study findings also enrich researcher's knowledge and skills in the field of project management.

## **1.8. Scope**

### **1.8.1. Geographical Scope**

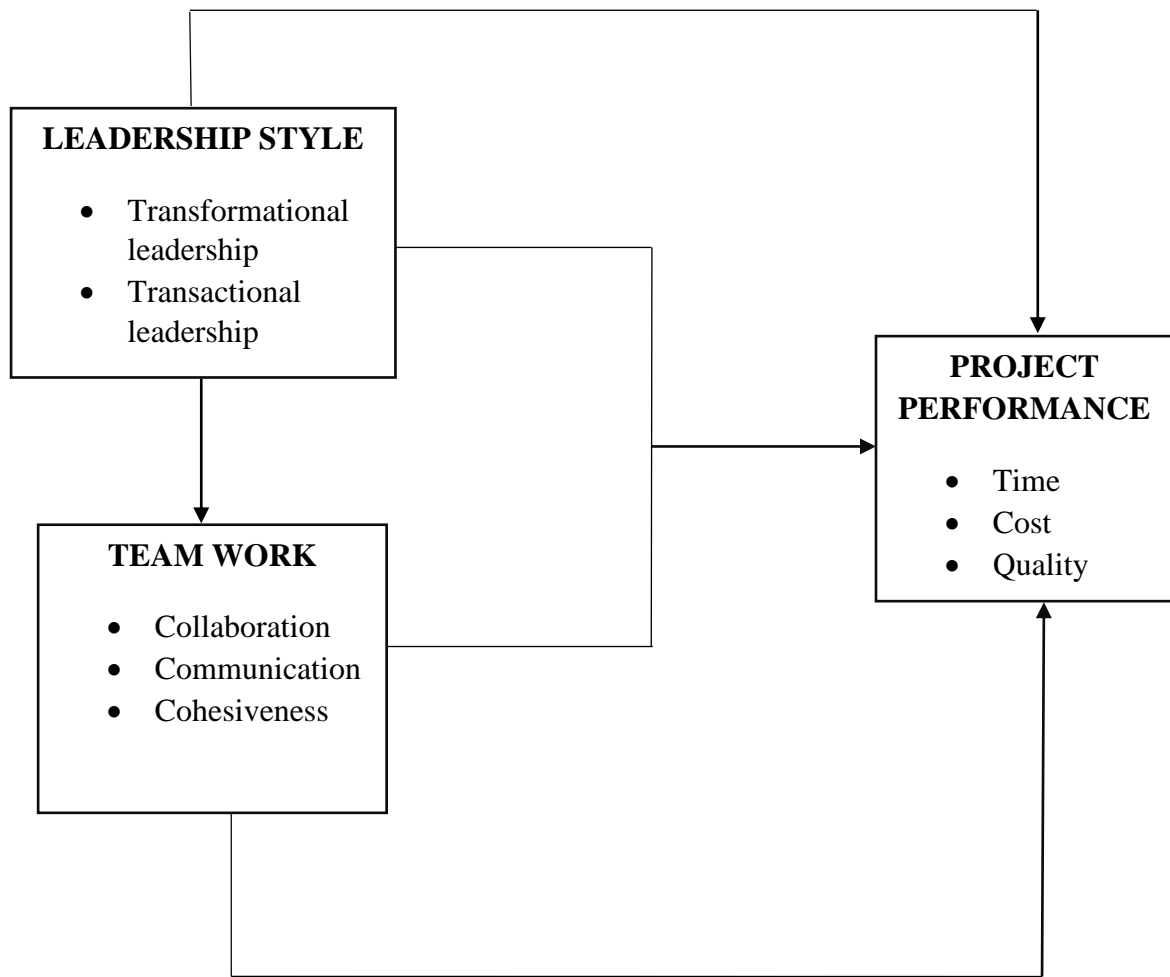
The study focused on National Water and Sewerage Corporation (NWSC) projects in Kampala. The constitution of Uganda sets the foundation for all water supply projects in Uganda. Article 29, clause 1 emphasizes that: "Every person is entitled to clean and safe water". The implication of this statement is that government is committed to ensuring that clean and safe water is available to every person. National Water and Sewerage Corporation is mandated with effecting Article 29 by providing sewerage and water services in various parts of Uganda. NWSC extends main pipes from which people can connect secondary pipes to their houses on payment. Despite the importance of easy water access through government's initiatives on clean and safe water, a number of settlements within Kampala have limited access to it. In some areas people have resorted to using borehole and wells to access water. This exposes them to waterborne diseases from unclean, contaminated water. Moreover, the water quality is not monitored at these points. Therefore, this study is concerned with the ways of accessing and provision of water in Kampala district, which is the most populous district in Uganda.

### **1.8.2. Content Scope**

The study focused on the relationship between leadership style, team work, and project performance. Specifically, the study measured transactional and transformational leadership styles as well as collaboration, communication and cohesiveness of teams and their relative effect on cost, time and quality performance of projects in NWSC.

### **1.9. Conceptual Framework**

This study is guided by the visionary theory of leadership. Visionary leadership theory involves transformational and transactional leadership styles (Anderson & Sun, 2017). According to this leadership theory, leaders influence followers by communicating ideas, creating acceptance of the ideas, motivating them to support and implement the ideas, thereby improving overall performance of organizational projects. In relation to this model of leadership (Figure 1), leadership style, team work and project performance are closely related. The model shows that both leadership style and team work have a joint effect on project performance (Mishra et al., 2011; Yang et al., 2013). It also shows that leadership style directly affects teamwork (Bass, 1990, Wang, et al., 2005). The model further shows that leadership style alone, directly influences project performance (Prabhakar, 2005; Sunindijo et al., 2007). It also shows that team work alone directly affects project performance (Assaf, et al., 2014; Chan et al., 2001).



**Figure 1: Conceptual Framework.**

*Source: Summarized from Literature (Albert, 2004; Avolio, 1999; Bass, 1990; Bass & Avolio, 1994; Bucia et al., 2010; Chan, et al., 2001; Cookie-Davies, 2002; Gowan & Mathieu, 2005; Jung & Berson, 2003; Mendelsohn, 1998; Mishra, et al., 2011; Muller & Turner, 2010; Pinto & Slevin, 1988; Stamatia, et al., 2012; Wang et al., 2005; Yammarino, et al., 1998; Yang et al., 2013; Zaccaro, et al., 2001; Zhang & Fan, 2013).*

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1. Introduction**

This chapter examines both conceptual and empirical literature on leadership style, Teamwork and Project performance. It also discusses the objectives and the variables set in the conceptual framework.

#### **2.2. Leadership Style and Project Performance**

Cole (1996) defines leadership as a dynamic process in which one individual influences others to contribute to achievement of the group goals. Within a project set up, it is recognized that the project manager must provide leadership in order to ensure effective planning, co-ordination and control of project activities through application of appropriate project management knowledge and systems. However, existing literature acknowledges that an effective project manager must not only be technically qualified but must also possess the requisite soft skills such as leadership and people management which are essential in their roles (Muzio et al., 2007).

Leadership may be transactional or transformational. Transactional leadership focuses on the role of supervision, organization and group performance and the exchanges that take place between leaders and followers and is based on a system of rewards and punishments (Charry, 2012). In other words, on the notion that a leader's job is to create structures that make it abundantly clear what is expected of followers and the consequences associated with meeting or not meeting expectations (Lamb, 2013). Transactional leadership is an extremely common component of many leadership models and organizational structures (Lamb, 2013).

Unlike transactional theory of leadership, transformational theory focuses on the connections formed between leaders and followers. Here, a leader engages with others and is able to create a connection that results in increased motivation and morality in both followers and leaders. Transformational leadership may be likened to charismatic leadership where leaders with certain qualities, such as confidence, extroversion, and clearly stated values, are seen as best able to motivate followers (Lamb, 2013). Relationship or transformational leaders motivate and inspire people by helping group members see the importance and higher good of the task. These leaders are focused on the performance of group members, but also on each person to fulfilling his or her potential. Leaders of this style often have high ethical and moral standards (Charry, 2012).

In a study to assess leadership style in the construction industry, Tabassi and Babar (2010) administered 220 questionnaires to top management team's members of large construction companies in Iran. Analysis of data from 107 responsive questionnaires identified transformational leadership style as the most common style in the Iranian construction industry. However, their results of high task and almost high relationship were in contradiction with those of Rowlinson, et al., (1993) and Walker and Kalinowski (1994) who had observed a low-task and high relationship attitude as appropriate leadership style in Hong Kong. In addition, data was only collected from contractors and hence did not incorporate views of other project team members.

Improving project performance through the project's lifespan is an important aspect of project management (Love et al., 2011). Several authors have used varying sets of characteristics to determine project performance and this is partly due to the fact that different stakeholders view project performance differently (Khan et al., 2014; Zhang & Fan, 2013). One of the most commonly used models is the "Iron Triangle" or "Golden Triangle" in which project performance is evaluated based on completion of the

project within time, cost and quality (Atkinson, 1999). However, various researchers (Lim & Mohamed, 1999; Shenhar, 2001; Wateridge, 1995; Yu et al., 2005) have criticized the use of iron triangle criteria due to its simplicity in evaluating project performance and have proposed inclusion of other aspects such as key stakeholders' satisfaction, future potential to the organization and customer's benefits.

In addressing weakness of the "Iron Triangle", Hwang et al. (2013) posit that project performance can be assessed in both qualitative and quantitative terms by considering outcomes such as cost, time, safety, quality and rework. In addition, Zhang and Fan (2013) developed a model for evaluation of project performance in the construction projects with model parameters being meeting project's overall performance (time, cost and quality); meeting owner's requirements; meeting project's multiple goals (health and safety, risk management, claim management and absence of conflict) and stakeholders' satisfaction (owner, project team, end-user, suppliers and other stakeholder satisfaction). Further, Gowan and Mathieu (2005) contend that project performance can be assessed through time, cost, quality, satisfaction and business value parameters.

Kissi et al., (2013) examined the impact of leadership style on project performance through administration of questionnaires to 350 project managers in the United Kingdom (UK). Using data from 112 completed responses, the study found that leadership style was positively related to project performance. The results were consistent with Waldman and Atwater (1994) who found that leadership positively influenced project outcomes (quality, cost, time and stakeholders satisfaction). The study was however based on just one organization thereby limiting generalizability of the results. In addition, risk of common source data was present as data was collected from project managers only and hence other project team members' perspective were not included in the study. They could have led to bias in final results of the study.



### **2.3. Leadership style and Teamwork**

Teamwork refers to the ability for project members to work efficiently as a team. Thus, teamwork represents a set of values that encourages listening, responding constructively to views expressed by others, providing support and recognizing the achievement of others (Wang, et al., 2005). In projects, teamwork is regarded as a key contributor to performance as it provides the means through which organizations are able to integrate a multitude of expertise required for successful completion of a project (Mendelsohn, 1998). Several scholars have indeed shown that project performance is influenced by teamwork (Chan, et al., 2001; Mishra, et al., 2011; Muller & Turner, 2012; Wang, et al., 2005).

Through leadership, project managers are able to articulate project vision, integrate and coordinate project team members, build team commitment and also enhance team cohesion (Bucia, et al., 2010). However, for some projects, formation of a cohesive team is complicated in that project team members might be simultaneously involved in several projects with different leadership and management styles. Thus, for successful project execution, project managers should endeavor to understand their project teams and adapt their leadership style accordingly.

Hoegl and Gemuenden (2001) suggest that the behavior of a project team can be conceptualized in terms of activities (observable actions), interactions (connectedness of members) and sentiments (member's emotions, motivations or attitudes). Existing literature also shows that leadership is positively related to teamwork in terms of team communication, collaboration and cohesiveness (Bass, 1990; Zaccaro, et al., 2001; Wang, et al., 2005). Several studies (Bass & Avolio, 1994; Yammarino, et al., 1998) posit that leadership style adopted can enhance team communication.

Wang et al., (2005) investigated the impact of charismatic leadership style on team cohesiveness and performance of Enterprise Resource Planning (ERP) project through administration of 300 questionnaires to project team members in Taiwan. Based on 106 returned questionnaires, they found a significant correlation between leadership and level of team cohesiveness. In addition, the study found a positive correlation between team cohesiveness and project performance. The results were consistent with those of Cheung et al., (2001) and Thite (2000) which showed that charismatic leadership has a significant influence on team members' behavior and performance. Further, the study also found that regardless of the leadership style adopted, the project manager's experience had a positive influence on project performance.

In a study to investigate the relationship between transformational leadership style of project managers and of line managers on team/employee's motivation, commitment and stress, Keegan and Den Hartog (2004) administered 181 questionnaires to employees working under different project managers and line managers. Based on data from returned questionnaires, they found no significant difference in leadership style between the line managers and project managers. In addition, despite finding a significant link between transformation leadership style and employee's commitment and motivation for those working under line manager, no significant relationship was found for employees working in project teams. However, generalizability of their results was limited by the fact that the study was based on one organization in which project based work was not fully established.

#### **2.4. Team Work and Project Performance**

In an endeavor to address the issue of time over-run, cost over-run and quality of projects in Saudi Arabia, Assaf, et al., (2014) investigated the impact of project team effectiveness on project performance. Based on analysis of data collected from 94 project

team members from 13 different construction projects, they found a strong positive correlation between team effectiveness and project performance. In addition, they found a correlation between leadership style and project performance, which was consistent with Choi (2002) findings that leadership plays an important role in team motivation and unity and consequently in project performance. The study also found that effective teams have clear goals, high level of cooperation and cohesiveness.

In another study, Chan et al. (2001) investigated the effect of teamwork on project outcome in Hong Kong. The study involved administration of 120 questionnaires to project managers, architects, quantity surveyors and engineers. Based on data from 53 questionnaires that were received back, the study found a positive relationship between teamwork, project team members' job satisfaction and successful project performance.

## **2.5. Leadership style, Teamwork, and Project performance**

Yang et al., (2011) examined the relationships among the project manager leadership style, teamwork and project performance in the Taiwanese construction industry. Using data from 213 interview responses, they found a significant relationship between leadership style and teamwork. This was in line with other studies (Wang et al., 2005; Zaccaro et al., 2001) that had found positive relationship between leader's behaviour and teamwork. In addition, they also found teamwork to be positively related to project performance. However, the study sample was drawn from capital facility projects which limited generalizability of findings in other projects. In addition, despite the study capturing data on transformational and transactional leadership styles, they did not investigate the impact of specific leadership styles on project performance.

With the aim of identifying leadership qualities of an effective project manager, Mishra et al., (2011) administered 500 questionnaires to project team members in India. Using data from 137 questionnaires returned, they found a strong correlation between project manager's leadership style, teamwork and project performance. In addition, they found communication ability of the project manager as the most important factor followed by visionary, integrity and being supportive of team members.

Yang et al., (2013) undertook a study to validate the effect of project manager's Leadership style on project performance in the Taiwanese construction industry. Based on data from 213 interview responses and Structural Equation Modeling (SEM), they found a significant relationship between leadership style and project performance. In addition, they found a strong link between leadership and teamwork in terms of communication, collaboration and cohesiveness. Further, the study as well as the mediating role of teamwork in the relationship between leadership style and project performance. However, generalizability of findings is limited since the study sample was drawn from capital facility projects. In addition, qualitative factors which could have helped to explain other explanatory variables were not included in the analysis.

## **CHAPTER THREE**

### **METHODOLOGY**

#### **3.1. Introduction**

This chapter presents the research methodology which guided this study. It covers the research design, study population, sample size and sampling procedure, data sources, data collection instruments, measurement of study variables, reliability and validity of the instruments, data processing and analysis as well as ethical considerations.

#### **3.2. Research Design**

This study used a quantitative approach to describe and draw inferences from findings on the relationships between leadership style, team work, and project performance of NWSC projects in Kampala. The study was also cross-sectional in nature as data was collected at a point in time across several projects in order to determine the relationship among the study variables. This chosen design affords good control over the measurement process, maximizes completeness of key data and ensures greater control over precision of estimates in sub groups (Olsen & St George, 2004).

#### **3.3. Study Population**

The study population comprised of 50 projects identified within NWSC (NWSC, 2019). From each project five respondents were targeted. The unit of inquiry per project included one project manager or supervisor as well as four team members comprised of technical staff, field officers and support staff.

#### **3.4. Sample Size and Selection Procedure**

A sample size of 44 projects was determined on the basis of Krejcie and Morgan (1970) from a total population of 50 identified projects in NWSC. Therefore, a total of 220 respondents

were targeted. Simple random sampling was used to select the projects and the selection of the projects to be included in the sample were based on a raffle where the projects were assigned random numbers, put in a box, shaken and picked randomly without replacement. Purposive sampling was used to target the project leaders while simple random sampling was used to target the team members.

### **3.5. Data Sources**

The data source was primary data collected through administration of questionnaires to project leaders and team members involved in the projects.

### **3.6. Data Collection Instruments**

Self-administered structured questionnaires (SAQ) were given to the respondents. With the SAQs, respondents were assured of anonymity and privacy, and as such they feel free to provide honest responses with no possibility for interviewer biases (Mugenda & Mugenda, 2008). Closed ended questions were used on a five likert-scale rating as used by Siu et al. (2005) to ease data processing and analysis. The scale entails strongly disagree, disagree, not sure, agree, and strongly agree. The closed ended questions were preferred because they were easy to fill out. The questionnaires were delivered to the employees and handpicked after they were filled out.

### **3.7. Measurement of Variables**

Leadership style was measured in terms of transformational and transactional leadership styles adopted from the multifactor Leadership Questionnaire (MLQ) (Bass, Avolio, Jung, & Berson, 2003).

Team work was measured in terms of collaboration, communication and cohesiveness based on Wang, et al. (2005) and the model validated by Yang et al. (2013)

Project performance was measured based on Muller and Turner (2007, 2010), Pinto and Slevin (1988) and Yang et al. (2011) and evaluated in terms of time and cost performance due to the existence of objective measures for the two. It was also measured in terms of quality (Albert, 2004; Stamatia et al., 2012).

### **3.8. Reliability and Validity of Instruments.**

#### **3.8.1. Validity**

Validity refers to the extent with which the instrument being used is measuring the concept set out to measure. For validity, the instrument was first subjected to an expert evaluation in which its adequacy was assessed given the study objective; this was done using the content validity index (CVI) (Amin, 2005). A CVI of 0.7 and above was accepted. In addition, the questionnaire was subjected to a pilot survey of 10 respondents to ensure clarity and understandability of the survey instruments. Results of the expert evaluation and pilot survey were used to update the study instrument (Kibuchi, 2012).

**Table 1**

*Results from Validity tests*

<b>Variable</b>	<b>CVI</b>	<b>Number of items</b>
Leadership style	<b>.785</b>	28
Teamwork	<b>.85</b>	20
Project performance	<b>.826</b>	23

*Note: Primary data (2020)*

Results in table 1 showed that all variables under study had valid questions since the CVI for all of the variables was above 0.70.

#### **3.8.2. Reliability**

Reliability is the measure of how stable and consistent the test results are such that the same results are obtained (Chritensen & Johnson, 2004). Stability gives an assurance on the extent to which results are consistent over time. For reliability, the study made use of survey items

tested for reliability by other researchers. In addition, by making use of data from the piloted questionnaires, internal consistency was measured through computation using the Cronbach alpha method (Sekaran, 2000). A cut-off alpha coefficient of 0.7 was used to prove the reliability of the instrument (Nunnally, 1978).

**Table 2**

*Results from Reliability Tests*

<b>Variable</b>	<b>Cronbachs Alpha</b>	<b>Number of items</b>
Leadership style	<b>.951</b>	28
Teamwork	<b>.903</b>	20
Project performance	<b>.892</b>	23

*Note:* Primary data (2020)

Results in table 2 showed that all variables under study had reliable questions since the Cronbach’s Alpha statistic for all of the variables was above 0.70 according to the threshold value suggested by Nunnally (1978).

### **3.9. Data Processing and Analysis**

The data collected was edited for completeness and consistency to ensure correctness of the information given by the respondents. The statistical package for social scientists (SPSS 23) was used for data entry and analysis of the study variables. Correlation was used to measure the relationship between the study variables. Pearson’s correlation coefficient was employed to establish the associations in the variables and Regression analysis for establishing the predictive power of the independent variables on the dependent variable.

### **3.10. Ethical Considerations**

Due to a lot of controversy, sensitivity and value judgments attached to organizational information, respect and confidentiality were accorded to the decisions of the respondents since they owned their information. In addition, adequate information was provided to potential respondents to ensure that they participated willingly from an informed point



of view. Further, the researcher sought permission from respondents before engaging them in the study. Respondents were assured of confidentiality and that their names were not to appear anywhere and, so, there would be no way to identify who provided which information.

## CHAPTER FOUR

### DATA PRESENTATION, ANALYSIS AND INTERPRETATION OF FINDINGS

#### 4.1. Introduction

In this chapter, data on the study variables was analysed and presented in two sections. The results presented were analysed using descriptive analysis, factor analysis, correlation analysis and regression analysis. The first category presents the descriptive findings and the second section presents inferential statistics.

#### 4.2. Response Rate

Out of the targeted 220 respondents, complete data was received for 168 respondents which accounts for 76.3% response rate. This response rate was considered good for further analysis based on Mugenda and Mugenda (2003) and Saunders et al., (2007) assertion that a response rate of 50 percent is adequate, 60 percent is good while a response rate of 70 percent is very good. The non-response rate was 23.7%. This was because some respondents were not available at the time of the study while others failed to return the questionnaires given to them. However, adequate data for the study was obtained.

#### 4.3. Demographic Characteristics of Projects

The demographic characteristics of the respondents analysed include; capital invested in the project, source of funding for projects, duration taken by the project to be completed, category of project, complexity of the project. The other background information was about sex, age, and education level of respondents, duration working at the projects and position held at NWSC as indicated below.

#### 4.3.1. Amount of Money Invested in the Project

During the study, the amount of money invested in each project was established. Results are presented in Table 3.

**Table 3**

*Amount of money invested in the project*

<b>Variable</b>	<b>Category</b>	<b>Frequency</b>	<b>Percentage</b>
Capital invested in the project	Less than 1 billion	15	34
	Between 1 billion and 900 billion	22	50
	More than 900 billion	7	16
<b>Total</b>		44	100

*Note: Primary data (2020)*

Results in Table 3 show that the capital invested in most projects was between 1 billion and 900 billion, followed by less than 1 billion while projects with more than 900 billion shillings were the least. This shows that the majority projects had a huge capital invested in them. Such projects require good leadership and teamwork to efficiently use the capital involved in order to perform well.

#### 4.3.2. Source of project funding

The source of funding was sought for projects on which respondents worked. Table 4 shows funders who included Government of Uganda, NWSC, Banks, Donor Agencies and other Governments.

**Table 4***Source of project funding*

<b>Variable</b>	<b>Category</b>	<b>Frequency</b>	<b>Percentage</b>
Source of project funding	Government of Uganda	9	20
	NWSC	7	16
	Banks	3	7
	Donor Agencies	25	57
<b>Total</b>		44	100

*Note: Primary data (2020)*

Results in Table 4 show that most respondents worked on projects funded by donor agencies, followed by Government of Uganda (GoU) funded projects, NWSC, and Bank funded projects. Such funders require accountability in terms of good project performance which can be achieved with good leadership style and teamwork among project members.

**4.3.3. Project Duration**

The duration of time from project inception to completion was also sought after. Results in Table 5 show that the duration for projects was between 0 to 11 years.

**Table 5***Project duration*

<b>Variable</b>	<b>Category (years)</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Project duration	0-5 Years	36	82
	6-11 Years	8	18
<b>Total</b>		44	100

*Note: Primary data (2020)*

Results in Table 5 shows that the duration for most projects was 0-5 years, with fewer projects having a duration of 6-11 years. Given that projects usually are expected to be completed within specific timelines, they require good leadership styles and teamwork to perform well and complete project activities within the planned timelines.

#### 4.3.4. Project Type

This section shows the kinds of projects in this study. They included new/greenfield, renovation/rehabilitation and expansion.

**Table 6**

*Project Type*

<b>Variable</b>	<b>Category</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Project type	New/ Greenfield	25	57
	Renovation/Rehabilitation	14	32
	Expansion	5	11
<b>Total</b>		44	100

*Note: Primary data (2020)*

Results in Table 6 show that most projects were new/ greenfield, followed by projects under renovation/rehabilitation while projects under expansion were the least in number. The results show that the study covered different types of projects which require good leadership styles and teamwork to achieve project objectives, hence registering good performance.

#### 4.3.5. Project Complexity

In this study, respondents were asked to rate the complexity of projects, ranging from low to high. Details are presented in Table 7.

**Table 7**

*Project Complexity*

<b>Variable</b>	<b>Category</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Project complexity	Low	6	14
	Medium	11	25
	High	27	61
<b>Total</b>		44	100

*Note: Primary data (2020)*

As shown in Table 7, the complexity for most project was high although some were medium and others low. Projects that are highly complex require proper leadership and teamwork in order to achieve organizational objectives.

## 4.4 Demographic Characteristics of Respondents

### 4.4.1 Sex of Respondents

The gender of respondents was also sought and results are presented in Table. 8

**Table 8**

*Gender of respondents*

<b>Variable</b>	<b>Category</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Sex	Male	122	73
	Female	46	27
	<b>Total</b>	<b>168</b>	<b>100</b>

*Note: Primary data (2020)*

Table 8 indicates that majority of the respondents were males compared to females. This indicates that study results were obtained from gender balanced respondents without bias, therefore are reliable.

### 4.4.2 Respondents' age group

The age group of respondents and results are presented in Table 9

**Table 9**

*Respondents' age group*

<b>Variable</b>	<b>Category (years)</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Age	20-30	29	17
	31-40	109	65
	41-50	21	13
	51 and above	9	5
<b>Total</b>		<b>168</b>	<b>100</b>

*Note: Primary data (2020)*

Table 9 indicates that majority of the respondents were aged between 31-40 years, followed by 20-30, then 41-50, while 51 and above years were the least. This means that respondents were from different age groups and at the same time results indicate that all respondents were mature and able to provide reliable data for the study.

#### 4.4.3 Respondents' Level of Education

The respondents' level of education and results are presented in Table 10

**Table 10**

*Respondents Level of Education*

<b>Variable</b>	<b>Category</b>	<b>Frequency</b>	<b>Percentage</b>
Level of education	PhD	4	2
	Masters' Degree	66	39
	Bachelors' Degree	97	58
	Diploma	1	1
<b>Total</b>		<b>168</b>	<b>100</b>

*Note: Primary data (2020)*

Table 10 shows that majority of the respondents had bachelor's degrees, followed by respondents with Master's Degree, Diploma and lastly PhD. This indicates that all the respondents were educated and able to understand and interpret research questions to provide reliable data.

#### 4.4.4 Duration at NWSC

Respondents were also asked how long they had worked at NWSC. Results are presented in

Table 11

**Table 11**

*Duration at NWSC*

<b>Variable</b>	<b>Category (Years)</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Duration	0-2	14	8
	3-5	56	33
	6-8	54	32
	>9	44	27
<b>Total</b>		<b>168</b>	<b>100</b>

*Note: Primary data (2020)*

Results in Table 11 show that most respondents worked at NWSC for 3-5 years, followed by those who worked for 6-8 years, then 9 years and above, and lastly 0-2 years. The results indicate that the majority respondents had worked at NWSC for a long period of time and

were in position to give reliable information on how leadership styles and teamwork relate to performance of NWSC projects.

#### 4.4.5 Current position at NWSC

This section presents the positions held by respondents as shown in Table 12.

**Table 12**

*Current position at NWSC*

<b>Variable</b>	<b>Category</b>	<b>Frequency</b>	<b>Percentage</b>
Current position at NWSC	Project manager	23	14
	Supervisor	6	4
	Field Officer	52	31
	Consultant	6	4
	Team leader	15	9
	Technical staff	36	21
	Support staff	30	17
<b>Total</b>		<b>168</b>	<b>100</b>

*Note: Primary data (2020)*

Results in Table 12 show that most respondents were field officers, followed by technical staff, support staff, project managers, team leaders, supervisors, and consultants. The results indicate that most respondents were project team members who were responsible for ascertaining the need for teamwork to foster improved performance of projects.

#### 4.5 Factor Analysis

In order to discover the structure of the variables as formed by their underlying components and to determine if an underlying combination of the components could summarize the original set of variables, a factor analysis was performed. Factor analysis is specifically carried out to establish the significance hierarchy of the components of the major constructs, and the indicators of those constructs that best explain them by virtue of the factor loadings associated with them. Using the Varimax method for principal components measurement, only those factors with an Eigen value greater than 1 were retained according to the Guttman-Kaiser rule.



#### **4.5.2 Factor Structure for Leadership Style**

The results in Table 13 show the underlying factor structure of leadership style, which exhibits the underlying combination of its constructs namely; transformational leadership and transactional leadership.

**Table 13***Factor structure for leadership style.*

	<b>Transformational leadership</b>	<b>Transactional leadership</b>
In my organization, leaders provide everybody with enough and necessary information about the project	.853	
Leaders focus on the project interests other than their personal interests	.651	
When things are getting harder, leaders are always visible	.741	
Leaders arouse individual and team spirit	.746	
Leaders inspire subordinates through acting as role models	.805	
Leaders talk optimistically about the future as well as the strategy	.724	
Leaders are always soliciting for new ideas from their employees	.880	
Leaders are trusted by the employees	.854	
Leaders always instill pride in their employees	.801	
Leaders promote innovativeness which enable others to think about new ways of implementing the project	.625	
Leaders motivate their employees by always providing challenging tasks	.835	
Leaders help employees develop themselves through teaching and coaching to develop their competences	.737	
Leaders are always there to encourage their employees especially when they feel incompetent	.670	
Leaders always listen to employees' concerns	.560	
Leaders pay attention to each individuals' need for achievement and personal growth	.771	
Leaders question assumptions and reframe problems	.673	
Leaders tell their employees what to do in order to be rewarded for their efforts		.871
Leaders provide recognition and rewards when employees reach their goals		.780
Leaders inform their employees of rewards they can get for successfully accomplishing tasks		.737
Leaders reward innovative ideas of employees		.773
In this organization, leaders set clear expectations and goals for the tasks at hand		.779
Leaders set standards of how tasks are to be carried out		.770
Leaders establish criteria for assessing and rewarding performance		.730
Leaders monitor employee performance during project work		.805
Leaders are firm believers in "if it isn't broke don't fix it"		.435
Leaders obtain necessary resources needed for accomplishing tasks		.429
Leaders keep track of mistakes from employees during project work		.807
<b>Eigen value</b>	<b>8.131</b>	<b>5.291</b>
<b>Variance (%)</b>	<b>50.821</b>	<b>48.098</b>
<b>Cumulative Variance (%)</b>	<b>74.547</b>	<b>71.963</b>
<i>Extraction Method: Principal Component Analysis, Rotation Method: Varimax with Kaiser Normalization, Rotation converged in 7 iterations.</i>		

Results in Table 13 show that of the two constructs of leadership style as indicated in the conceptual framework, transformational leadership (Eigen value = 8.131, Variance = 50.821%) was more prominent, explaining 50.8% variation, followed by transactional

leadership, (Eigen value = 5.291, Variance = 48.098%) explaining 48% variation. Both constructs explained approximately 72%. Further still, the results in the table summarize the items that under scored each of the constructs in their order of significance in as far as their corresponding factors are concerned. The magnitude or level of importance of each item is illustrated by the factor loadings, where a higher value indicates a higher magnitude.

### **4.5.3 Factor Analysis for Teamwork**

The results in table 14 show the underlying factor structure of teamwork, which exhibits the underlying combination of its constructs namely; collaboration, cohesiveness and communication.

**Table 14***Factor Structure for Teamwork.*

	<b>Collaboration</b>	<b>Cohesiveness</b>	<b>Communication</b>
Team members work together during problem solving sessions	.846		
During project work, team members are willing to share information and ideas	.693		
Team members listen to each other to clarify problems/issues.	.738		
Team members show respect and value for the skills, creativity and contributions of others	.696		
Every team member is willing to carry out tasks	.612		
Team members are empowered to carry out tasks	.575		
Team members are strongly attached and committed to the Project		.714	
Every team member feels responsible for maintaining and protecting the project		.495	
Team members work together effectively as a unified group towards a common goal		.586	
Team members participate readily and stick to the group		.549	
Team members respond to each other positively during discussions			.629
Team members are encouraged to freely express their views and opinions during discussions			.730
Team members exchange information and ideas among one another frequently			.620
There is a communication policy in place			.416
There are regular meetings to share project information			.790
Team members understand one another during project execution			.840
Team members ask questions for clarifications during discussions			.576
Team members openly give and receive feedback from others			.905
<b>Eigen value</b>	<b>2.847</b>	<b>2.344</b>	<b>3.209</b>
<b>Variance (%)</b>	<b>47.448</b>	<b>58.608</b>	<b>40.118</b>
<b>Cumulative Variance (%)</b>	<b>69.319</b>	<b>58.608</b>	<b>68.817</b>
<i>Extraction Method: Principal Component Analysis, Rotation Method: Varimax with Kaiser Normalization, Rotation converged in 4 iterations.</i>			

*Note: Primary data (2020)*

Of the three constructs of teamwork as indicated in the conceptual framework, communication (Eigen value = 3.209, Variance = 40%) was the most prominent, explaining 40% variation, followed by collaboration, (Eigen value = 2.847, Variance = 47.4%), and lastly cohesiveness (Eigen value = 2.344, Variance = 58.6%) which contribute 47.4% and 58.6% respectively. All of the three constructs explained approximately 68.8%. Further still, the results in the table summarize the items that underscored each of the constructs in their order of significance in as far as their corresponding factors are concerned. The magnitude or

level of importance of each item is illustrated by the factor loadings, where a higher value indicates a higher magnitude.

#### 4.5.4 Factor Structure for Performance

The results in table 15 show the underlying the factor structure of project performance, which exhibits the underlying combination of its constructs namely; time, cost and quality.

**Table 15**  
*Factor analysis for project performance.*

	<b>Time</b>	<b>Cost</b>	<b>Quality</b>
Project activities are carried out in the agreed time frames.	.743		
The final date of the project completion is clearly defined and known by every one	.598		
Clear and well stated deadlines are given for all project activities.	.899		
Management is very strict on project delivery time.	.810		
There are additional costs associated with scheduling delays.	.716		
The project staff meet deadlines assigned to them.	.543		
Supervisors encourage and motivate staff to complete project activities on time	.869		
The projects undertaken sometimes fail to achieve the deliverables on time	.759		
Every activity has a budget		.857	
The financial limits for the project are clearly stated.		.770	
The quotations for the project activities are realistic.		.673	
Often the actual money spent on project activities is less than the budgeted.		.683	
The budget is always flexible to allow room for adjustment if necessary		.807	
Spending on activities is clearly monitored		.615	
The projects are delivered within the stipulated budgets.		.817	
There are cost overruns from the initial budget		.947	
There is always a strict follow up on accountabilities for project resources		.708	
The project conforms to specifications			.413
There are no defects in completed project outcomes			.682
There is no doubt in the quality of materials used in the project			.726
The project activities undertaken meet the required expectations			.612
Stakeholders are satisfied with the outcomes of the project activities			.629
<b>Eigen value</b>	<b>3.483</b>	<b>3.244</b>	<b>1.747</b>
<b>Variance (%)</b>	<b>43.543</b>	<b>36.045</b>	<b>34.935</b>
<b>Cumulative Variance (%)</b>	<b>74.204</b>	<b>76.418</b>	<b>61.226</b>
<i>Extraction Method: Principal Component Analysis, Rotation Method: Varimax with Kaiser Normalization, Rotation converged in 3 iterations.</i>			

*Note: Primary data (2020)*

Of the three constructs of performance as indicated in the conceptual framework, time (Eigen value = 3.483, Variance = 43.5%) was the most prominent, explaining 43.5% variation,

followed by cost, (Eigen value = 3.244, Variance = 36.0%), and lastly quality (Eigen value = 1.747, Variance = 34.9%) which contributes 36% and 35% respectively. All of the three constructs explained approximately 61.2%. Furthermore, the results in the table summarize the items that underscored each of the constructs in their order of significance in as far as their corresponding factors are concerned. The magnitude or level of importance of each item is illustrated by the factor loadings, where a higher value indicates a higher magnitude.

#### 4.6 Correlation Analysis

Correlation analysis was used to establish if there exists an association between pairs of the different variables of the study. This analysis facilitated the objectives of the study and consequently provided answers to the questions of the study.

**Table 16:**

*Correlation Analysis.*

Variable	1	2	3	4	5	6	7	8	9	10	11
1. Transformational	1										
2. Transactional	.826**	1									
<b>3. Leadership style</b>	<b>.968**</b>	<b>.941**</b>	<b>1</b>								
4. Collaboration	.488**	.508**	.519**	1							
5. Cohesiveness	.549**	.633**	.612**	.738**	1						
6. Communication	.592**	.627**	.635**	.853**	.703**	1					
<b>7. Teamwork</b>	<b>.593**</b>	<b>.639**</b>	<b>.641**</b>	<b>.943**</b>	<b>.854**</b>	<b>.951**</b>	<b>1</b>				
8. Time	.518**	.598**	.577**	.552**	.700**	.565**	.644**	1			
9. Cost	.475**	.539**	.525**	.643**	.689**	.699**	.735**	.840**	1		
10. Quality	.312**	.440**	.384**	.638**	.719**	.626**	.707**	.585**	.741**	1	
<b>11. Performance</b>	<b>.506**</b>	<b>.594**</b>	<b>.568**</b>	<b>.654**</b>	<b>.757**</b>	<b>.683**</b>	<b>.750**</b>	<b>.938**</b>	<b>.964**</b>	<b>.778**</b>	<b>1</b>

Correlation is significant at 0.01 level (2-tailed)

*Note: Primary data (2020)*

##### 4.6.1 Relationship between Leadership Style and Project Performance

The first objective of the study was to establish the relationship between leadership style and project performance. As shown in table 16, Pearson correlation coefficient ( $r = .568^{**}$ ) is

significant at 0.01 level which shows a significant strong positive relationship between leadership style and project performance. The positive nature of the correlation coefficient implies that an increase/improvement in leadership style would correspond to an increase in project performance, thus implying a direct relationship between the variables. This implies that leadership style significantly relates to project performance.

#### **4.6.2 Relationship between Leadership Style and Teamwork**

The second objective of the study was to examine the relationship between leadership style and teamwork. As shown in table 16, Pearson correlation coefficient ( $r = .641^{**}$ ) is significant at 0.01 level which shows a significant strong positive relationship between leadership style and teamwork. The positive nature of the relationship implies that improvement in leadership style leads to improvement in teamwork. This implies that leadership style strongly relates to teamwork.

#### **4.6.3 Relationship between Teamwork and Project Performance**

The third objective of the study was to assess the relationship between teamwork and project performance. As shown in table 16, Pearson correlation coefficient ( $r = .750^{**}$ ) is significant at 0.01 level shows a significant strong positive relationship between teamwork and project performance. The positive nature of the relationship implies that improvement in teamwork leads to improvement in project performance. This implies that teamwork strongly relates to project performance.

#### **4.7 Hierarchical regression analysis**

In table 17, hierarchical regression analysis was conducted to determine the effect of leadership style, teamwork, and demographic characteristics of projects namely capital

invested, source of project finding, project duration, project type and project complexity on project performance.

**4.7.1. Examining the combined effect of leadership style and teamwork on project performance.**

**Table 17**  
*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
1	.758 <sup>a</sup>	.575	.570	.32798	.575	111.673	2	165	.000
2	.793 <sup>b</sup>	.629	.612	.31140	.053	4.607	5	160	.001

a. Predictors: (Constant), Leadership style, Teamwork

b. Predictors: (Constant), Leadership style, Teamwork, Capital invested, Source of project finding, Project duration, Project type, Project complexity

Results in Table 17 show that Leadership style and Teamwork have a strong positive relationship with project performance (R= .758). The coefficient of determination (Adjusted R square) value is .570 which implies that leadership style and teamwork explain project performance by 57%. The results further show that the study variables have a significant effect on project performance (Sig. F. Change= 0.000).

Results in Table 17 also show that Leadership style, Teamwork, and demographic characteristics of projects namely Capital invested, Source of project finding, Project duration, Project type, and Project complexity have a strong positive relationship with project performance (R= .793). The coefficient of determination (Adjusted R square) value is .612 which implied that leadership style, teamwork and demographic characteristics of projects explain project performance by 61.2%. The results further show that the study variables have a significant effect on project performance (Sig. F. Change= 0.001).



**Table 18***Coefficients.*

		<b>Coefficients<sup>a</sup></b>				
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.552	.247		2.237	.027
	Leadership style	.129	.057	.148	2.244	.026
	Teamwork	.726	.073	.655	9.907	.000
2	(Constant)	.433	.310		1.399	.164
	Leadership style	.013	.064	.015	.208	.835
	Teamwork	.765	.077	.690	9.960	.000
	Project capital	.145	.053	.188	2.755	.007
	Source of project funding	-.001	.018	-.004	-.061	.951
	Project duration	.238	.065	.190	3.655	.000
	Project type	.005	.036	.008	.136	.892
	Project complexity	-.049	.066	-.043	-.735	.463

a. Dependent Variable: Project performance

Results in Table 18 show that leadership style (Beta= .148, Sig. < .026) and teamwork (Beta= .655, Sig. < .000) significantly predict project performance. However, when combined with project characteristics, only teamwork (Beta= .690, Sig. < .000) significantly predicts project performance.

The results further show that of the demographic characteristics of projects, only project capital (Beta= .053, Sig. < .007) and project duration (Beta= .190, Sig. < .000) are strong and significant predictor of project performance. As such, the amount of capital invested in a project influences project performance. Additionally, the duration within which a project is expected to be completed has an effect on project performance. Therefore, project leadership style, teamwork, project capital and project duration significantly influence project performance.

## **CHAPTER FIVE**

### **DISCUSSION OF FINDINGS, CONCLUSION AND RECOMMENDATIONS**

#### **5.1. Introduction**

This chapter discusses the findings of the study in relation to the study objectives, while comparing and contrasting them with current literature. Conclusions, recommendations and suggests areas for further studies are drawn in this chapter. The chapter further highlights limitations faced by the study.

#### **5.2. Discussion of Results**

The main purpose of the study was to examine the relationship between leadership style, team work, and project performance of NWSC projects in Kampala.

##### **5.2.1. Leadership Style and Project Performance**

From the findings, there was a significant positive relationship between leadership style and project performance. This implies that when the leadership style is good, there is likelihood that projects will improve performance. For instance, if project leaders ensure effective planning, coordination and control of project activities through application of appropriate project knowledge and systems, there will be improved performance of the projects. In addition, if leaders reward employees who achieve the set targets, they will be motivated to always work harder for more rewards, thereby leading to improved performance of projects. Also, if leaders punish employees who fail to achieve set targets, the punishment will act as a deterrent to other employees. This benefits the project because other employees will not relax and retard performance of projects, which will eventually lead to improved project performance. This is consistent with Charry (2012) who asserted that transactional leadership focuses on the role of supervision, organization and group performance and the exchanges that take place between leaders and followers and is based on a system of rewards and

punishments to ensure that projects are completed realize improved performance in terms of providing quality services and completing project activities within the planned timeframe.

The positive nature of the relationship between leadership style and project performance also implies that if leaders engage with followers and creates healthy connections between them, there will be increased motivation for employees to work hard and aim at achieving projects goals and objectives, which translates to improved project performance. This is corroborated by Lamb (2013) who noted that transformational leaders are seen as best able to motivate followers and inspire people by helping group members to fulfil their potential, exhibit high ethical and moral standards which are critical for improved performance of projects through ensuring cost effectiveness and providing quality services.

### **5.2.2. Leadership Style and Teamwork**

Study findings also showed a significant relationship between leadership style and teamwork. This implies that good leadership style will promote the spirit of work together (*esprit du corps*) among team members. For instance, if leaders encourage collaboration among employees and other project stakeholders, smooth communication and promote cohesiveness, employees will exhibit a strong sense of teamwork. The strong relationship between leadership style and teamwork is in line with Bucia et al. (2010) who stated that through leadership, project managers are able to articulate project vision, integrate and coordinate project team members, build team commitment and also enhance team cohesion. Furthermore, Wang et al. (2005) also agree that leadership is positively related to teamwork in terms of team communication, collaboration and cohesiveness.

On the contrary, Muller and Tunner (2012) noted that formation of a cohesive team is complicated in that project team members might be simultaneously involved in several projects with different leadership and management styles. As such, successful project implementation requires that managers endeavor to understand their project teams and adapt their leadership style accordingly.

### **5.2.3. Teamwork and Project Performance**

During the study, it was further established that there is a strong relationship between teamwork and project performance. This implies that performance of projects would improve if there was teamwork within projects. For instance, if employees collaborate with each other very well, with smooth communication whereby information is communicated on time and promptly responded to, there will be timely completion of assignments and quality services that are cost effective, which critical for project performance. This is in line with Hwang et al. (2013) who posited that teamwork leads to the “Iron Triangle”, of project performance in terms of cost, time and quality. Similarly, in their model for evaluation of project performance in the construction projects, Zhang and Fan (2013) stated that engaging employees in teamwork facilitates meeting project’s overall performance in terms of time, cost and quality.

### **5.2.4. Leadership Style, Teamwork, and Project Performance**

Study findings revealed that leadership style and teamwork had a significant effect on project performance. This implies that leadership style and teamwork combined can improve project performance. This is in agreement with Yang et al., (2011) who contend that leadership style, teamwork significantly project performance. With good leadership, employees are encouraged to work together as a team, which leads to improved project performance. This is consistent with Mishra et al. (2011) who aver that good project managers are gauged through

communication ability integrity and being supportive of team members which are critical for improved project performance. Similarly, Lamb (2013) asserted that leaders who create structures that make it abundantly clear what is expected of followers and the consequences associated with meeting or not meeting expectations ensure that members work as a strong team to ensure enhanced performance. Therefore, a combination of leadership style and teamwork play a central role in promoting improved performance.

### **5.3. Conclusion**

The overall objective of this study was to examine the relationship between leadership style, team work, and project performance in NWSC projects in Kampala. Based on a quantitative analysis of projects in NWSC, the following conclusions can be drawn;

Firstly, as the visionary leadership theory had anticipated, this study has confirmed existence of a statistically significant positive relationship between project manager's leadership style and project performance. This study articulates that problems arising from poor leadership, such as corruption, mismanagement, and poor planning can lead to poor project performance. This can be avoided by adopting effective and practicable leadership styles, like transformational and transactional leadership, which have shown great success in projects all over the world and locally. In the same way, leaders should clearly articulate a vision that inspires employees to take greater responsibility for their work.

Secondly, teamwork is affected by project performance. It has been shown that there is a significant positive relationship between leadership style and teamwork. In a practical sense, once project leaders reinforce good leadership, there is bound to be increased collaboration among employees, smooth communication and cohesiveness within projects. By creating a

greater sense of empowerment, team leaders could indeed have a more positive effect on levels of team performance.

Thirdly, teamwork influences project performance. A significant positive relationship between teamwork and project performance highlights this notion. Teamwork is increasingly applied in many projects in order to improve performance, yet empirical evidence demonstrating the relationship between team effectiveness and project success is scarce. This study has clarified this linkage.

Fourth, leadership style and teamwork have a significant effect on project performance. This has been shown by the regression model which predicted how well the independent variables influenced the dependent variable.

#### **5.4. Recommendations**

Based on the findings, the study recommends the following;

Project leaders should use either or both transformational and transactional leadership in their projects. This will foster effective communication to their employees, motivate them to pursue a shared vision, lead by example, be role models for their teams, engage in inspirational motivation through emotional support and encouragement, recognize the uniqueness of every member and engage them in decision making all which are crucial for better project performance. Combining leadership training programs along with action learning can be one of the ways of training project managers on leadership style.

Project leaders should adopt effective and efficient communication systems, collaboration as well as other practices that would enhance teamwork as a way of improving project

performance. Similarly, team members should put in place systems to facilitate effective communication, monitoring and control of project activities in their teams.

In order to improve project performance, leaders should reward employees' efforts, tell them what to do to gain rewards, and give extra feedback and promotions for good work. Additionally, they should consider engaging in confidence building trainings; should be able to envision exciting new possibilities and communicate enthusiastically about what needs to be done to achieve goals. In the same way, leaders should focus on developing skills of project teams, treat a team member as individual rather than just a member of the team with different needs and abilities and also spend time in teaching and coaching of project teams. Project managers should also minimize their attentions on focusing on irregularities, tracking mistakes and deviations from standards and rather develop a culture of seeing mistakes as a potential learning opportunity. Searching for mistakes before commenting on performance and directing attention toward failure in meeting standards will have counterproductive effect on project performance and hence project managers should avoid such practices whenever possible.

Project leaders should devise means of improving effectiveness of teams by encouraging effective communication, resolving obstacles that hinder team collaboration and cohesion. This can be effected through inspiring and motivating team members to express their views freely, report issues honestly, coach them to have a receptive and trustful attitude during discussions and empower them to feel part of the project that will be responsible for maintaining and protecting the project.

Project leaders should also promote innovativeness to enable others to think about new ways of implementing the project. They should be available to encourage their employees especially when they feel incompetent and should also focus on the project interests other

than their personal interests. They should also always ensure that projects obtain all necessary resources needed for accomplishing tasks, team members should always endeavor to meet agreed-upon standards and targets and should always trust one another to get work done.

Project leaders should regularly train team members to empower them with necessary skills to enable them carry out tasks, they should always be given opportunities to ask questions for clarifications during discussions and leaders should promote flexibility in the overall schedule with respect to certain project milestones.

### **5.5. Suggested Areas for Further Study**

There is need to examine the mediation effect of leadership style on teamwork and project performance.

This study was undertaken in only NWSC and this may restrict generalizability of the results. Consequently, there is need for a country wide study investigating causes of poor project performance across various sectors of the economy.

### **5.6. Study Limitations**

Since the research was solely quantitative and required respondents to answer within predetermined responses, it could not fully elicit some of the in-depth opinions, feelings and attitudes of respondents.

It may not be possible to fully generalize the study results in determining project performance in other organizations since the study was limited to only studying leadership styles, team work and project performance of NWSC projects in Kampala.



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## APPENDICES

### APPENDIX 1: QUESTIONNAIRE (DATA COLLECTION TOOL)

My name is Olivia Betty Adong. I am a student of Makerere University Business School pursuing a master's degree in Business Administration. I am currently conducting a study to understand and establish the relationship between leadership styles, team work and project performance of National Water and Sewerage Corporation (NWSC) projects in Kampala.

There are no direct benefits for your participation but your responses will make a great contribution on my academic work and the findings may be used by your organization in strengthening the performance of projects.

Kindly spare some time and fill in this questionnaire. Remember, all the information you give will be kept with utmost confidentiality and will only be used to prepare a general report.

#### SECTION A: PROJECT CHARACTERISTICS AND RESPONDENT'S BIO DATA; please tick the appropriate response.

Name of project.....

**Capital invested:** How much money is invested in the project?

- Ugx Less than 1 billion                       Ugx Between 1 billion and 900 billion  
 Ugx More than 900 billion

**Source of funding:** Who funds the project?

- Government of Uganda                       NWSC                       Banks  
 Other Governments                       Donor Agencies

**Project time/ Duration:** How long does the project take to be completed?

- 0-5years                       6-11years                       12-17years  
 18-23years                       24years and more

**Project type:** What kind of project is it?

- Greenfield, that is new                       Renovation/Rehabilitation                       Expansion

**Project complexity:** Kindly rate the complexity of the project.

- Low                       Medium                       High

**Sex:** Please specify your gender.

- Male       Female

**Age:** Please specify your age.

- 20-30 years       31-40 years  
 41-50 years                       51 years & above

**Education:** what is the level of education attained so far?

- PhD                       Bachelor degree                       Master's degree                       Diploma

High school     Certificate                       Others (Please specify).....

**Duration:** How long have you been with this organization?

0-2years     3-5years  
 6-8years     9years & above

**Position:** What is your current position in this company?

Project Manager                                       Team leader  
 Supervisor     Technical Manager  
 Field officer     Support staff  
 Consultant     others (Please specify.....)

**SECTION B: LEADERSHIP STYLES**

This section provides an assessment of the leadership styles. Determine on the scale below your level of agreement with the statements.

SCALE: 1- Strongly Disagree; 2 - Disagree; 3-Not sure; 4-Agree; 5 – Strongly Agree

	Statements	Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree
	<b>TRANSFORMATIONAL LEADERSHIP</b>					
1	In my organization, Leaders provide everybody with enough and necessary information about the project					
2	Leaders focus on the project interests other than their personal interests					
3	When things are getting harder, leaders are always visible					
4	Leaders arouse individual and team spirit					
5	Leaders inspire subordinates through acting as role models					
6	Leaders talk optimistically about the future as well as the strategy					
7	Leaders are always soliciting for new ideas from their employees					
8	Leaders are trusted by the employees					
9	Leaders always instill pride in their employees					
10	Leaders promote innovativeness which enable others to think about new ways of implementing the project					
11	Leaders motivate their employees by always providing challenging tasks					
12	Leaders help employees develop themselves through teaching and coaching to develop their competences					
13	Leaders are always there to encourage their employees especially when they feel incompetent					
14	Leaders always listen to employees concerns					

15	Leaders pay attention to each individuals need for achievement and personal growth					
16	Leaders question assumptions and reframe problems					
	<b>TRANSACTIONAL LEADERSHIP</b>					
17	Leaders tell their employees what to do in order to be rewarded for their efforts					
18	Leaders provide recognition and rewards when employees reach their goals					
19	Leaders inform their employees of rewards they can get for successfully accomplishing tasks					
20	Leaders reward innovative ideas of employees					
21	Leaders get satisfied when employees meet agreed-upon standards and targets					
22	In this organization, leaders set clear expectations and goals for the tasks at hand					
23	Leaders set standards of how tasks are to be carried out					
24	Leaders establish criteria for assessing and rewarding performance					
25	Leaders monitor employee performance during project work					
26	Leaders are firm believers in “if it isn’t broke don’t fix it”					
27	Leaders obtain necessary resources needed for accomplishing tasks					
28	Leaders keep track of mistakes from employees during project work					

**SECTION C: TEAM WORK**

Indicate the extent to which you agree with each of the statements by putting a tick (✓) in the appropriate response.

	<b>Statements</b>	<b>Strongly disagree</b>	<b>Disagree</b>	<b>Not sure</b>	<b>Agree</b>	<b>Strongly agree</b>
	<b>COLLABORATION</b>					
1	Team members work together during problem solving sessions					
2	During project work, team members are willing to share information and ideas					
3	Team members listen to each other to clarify problems/issues.					
4	Team members show respect and value for the skills, creativity and contributions of others					
5	Team members trust one another to get work done					
6	Every team member is willing to carry out tasks					
7	Team members are empowered to carry out tasks					
	<b>COHESIVENESS</b>					
8	Team members are strongly attached and committed to the Project					
9	Every team member feels responsible for maintaining and protecting the project					
10	Team members feel proud to be part of the project					
11	Team members work together effectively as a unified group towards a common goal					
12	Team members participate readily and stick to the group					



	<b>COMMUNICATION</b>					
13	Team members respond to each other positively during discussions					
14	Team members are encouraged to freely express their views and opinions during discussions					
15	Team members exchange information and ideas among one another frequently					
16	There is a communication policy in place					
17	There are regular meetings to share project information					
18	Team members understand one another during project execution					
19	Team members ask questions for clarifications during discussions					
20	Team members openly give and receive feedback from others					

#### SECTION D: PROJECT PERFORMANCE

	<b>Statements</b>	<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Not sure</b>	<b>Agree</b>	<b>Strongly Agree</b>
	<b>TIME</b>					
1	Project activities are carried out in the agreed time frames.					
2	The final date of the project completion is clearly defined and known by every one					
3	Clear and well stated deadlines are given for all project activities.					
4	Management is very strict on project delivery time.					
5	There is flexibility in the overall schedule with respect to certain milestones.					
6	There are additional costs associated with scheduling delays.					
7	The project staff meet deadlines assigned to them.					
8	Supervisors encourage and motivate staff to complete project activities on time					
9	The projects undertaken sometimes fail to achieve the deliverables on time					
	<b>COST</b>					
10	Every activity has a budget.					
11	The financial limits for the project are clearly stated.					
12	The quotations for the project activities are realistic.					
13	Often the actual money spent on project activities is less than the budgeted.					
14	The budget is always flexible to allow room for adjustment if necessary					
15	Spending on activities is clearly monitored					
16	The projects are delivered within the stipulated budgets.					
17	There are cost overruns from the initial budget					
18	There is always a strict follow up on accountabilities for project resources					
	<b>QUALITY</b>					
19	The project conforms to specifications					
20	There are no defects in completed project outcomes					
21	There is no doubt in the quality of materials used in the project					
22	The project activities undertaken meet the required expectations					

23	Stakeholders are satisfied with the outcomes of the project activities					
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**Thank you for your participation**

APPENDIX 2: UNIVERSITY INTRODUCTION LETTER



**MAKERERE UNIVERSITY BUSINESS SCHOOL**

Plot 21A, Portbell Road, P. O. Box 1337, Kampala - Uganda  
Phone: Direct Line: +256-414-222545; General Line: +256-414-338120; Fax: +256-414-505921

*Faculty of Graduate Studies & Research*

January 30, 2020

TO WHOM IT MAY CONCERN


Dear Sir/Madam,

**RE: ADONG Betty Olivia      MBA      2017/HD10/105U**

The above named is a student of Makerere University Business School pursuing studies leading to the award of Master of Business Administration of Makerere University. She joined the School in 2017 and has completed the course work component of the program. She is currently carrying out research on the topic: **“Leadership Styles, Teamwork and Project Performance of National Water and Sewerage Corporation (NWSC) Projects in Kampala”**

Any assistance rendered to her will highly be appreciated.

Thank you,

  
Rodney Rusagara  
Faculty Administrator



## APPENDIX 3: NWSC INTRODUCTION LETTER



### NATIONAL WATER AND SEWERAGE CORPORATION

TELEGRAMS WATERS KAMPALA  
Telephone: +256-414-315 000  
+256-312-260414/5  
Fax: 0414 - 258 299/345531/346447  
Email: info@nwsc.co.ug

HEAD OFFICE

P. O. BOX 7053  
PLOT 3, Nakasero,  
KAMPALA

Ref.: BSS/R&D/20-02

Date: 19<sup>th</sup> February 2020

The Director, Planning and Capital Development  
NWSC HQ

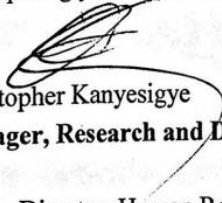
**Re: PERMISSION TO CONDUCT RESEARCH IN NWSC**

This is to introduce to you Ms ADONG Betty Olivia, a Masters student of Business Administration, at Makerere University Business School, who has been granted permission to conduct her research in NWSC. Her study research is titled "*Leadership Styles, Teamwork and Project Performance of National Water and Sewerage Corporation (NWSC) Projects in Kampala*"

The student would like to study the performance of projects with respect to leadership and teamwork. She will apply the methods of interviews and questionnaires to project leaders and implementers. It is expected that the findings from this research will be made available to NWSC (*ensure that a copy of your final report/thesis is brought to the NWSC Library*) and key recommendations beneficial to the corporation will be adopted to improve our operations. In this regard, you are kindly requested to accord her access to the required information to enable her successfully accomplish her research project.

This admission is valid up to end of June 2020.

Anticipating your usual cooperation.

  
Christopher Kanyesigye  
Manager, Research and Development

C.C. Director, Human Resources

#### **APPENDIX 4: NAMES OF THE PROJECTS**

Bugolobi sewerage treatment project

Lake Victoria Water and sanitation projects (WATSAN projects)

Kampala Sanitation Programme. (KSP)

Integrated water management and development project

Katosi water treatment plant project

Gaba I Rehabilitation project

Gaba II Rehabilitation project

Katosi - Kampala Transmission Project

Infrastructure Improvements in informal settlements of Kampala

Consulting services for the preparation of detailed design, tendering and works supervision of the rehabilitation, restructuring and extension of Kampala water supply network.

Water Source project/ Catchment management

Earth boring of 4 points along Entebbe road

Design and relocation of pipelines for construction of Kulambiro ring road

Design and relocation of pipelines for construction of banda – kireka road

Design and relocation of pipelines for construction of kabuuusu- Lweza road

Design and relocation of pipelines for construction of Lukuli

Design and relocation of pipelines for construction of Kanyanya- Bahai- Kisasi

Design and relocation of pipelines for construction of kirinya- bukasa road

Design and relocation of pipelines in Nakawa- Ntinda

Servicing of water meter's in Kampala suburbs'

Pipe laying for Kampala city centre- city square

Design of a support structure for a DN 700 pipe across the Nakivubo Channel

Kampala water production improvement project

Namasuba water Reservoir project

Kanyanya water Reservoir project

Mutundwe water reservoir project

Nakivuubo sewerage project

Muyenga water project

Upgrade of Kapeeka water supply system project

Relocation of pipes of KCCA road upgrading of the Northern bypass

Relocation of pipes of KCCA road upgrading of Bukoto- Kisaasi road

Kirudu compact waste water treatment project

Water Management and development projects

Package sewage treatments for Bwaise

Upgrading Bulk water transfer for Rubaga- Muyenga

Bulk water reservoirs transfer for suburbs in Kampala

Relocation of pipes of KCCA road upgrading for Kyaliwajjala

Improving 36 junctions in Kampala

Entebbe Express way pipe laying project

Clock tower Mukwano fly over water project

Kampala south water and sanitation projects (KSWSP)

Boosting of water supply in Kampala

Upgrading Bulk water transfer for Ntinda -Kisaasi