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PROJECT IMPLEMENTATION MANAGEMENT AND ASSESSMENT OF FAILURE FACTORS OF CYCLING PROJECT OF ADDIS ABABA CITY ROAD AND TRANSPORT BUREAU

BY

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Addis Ababa, Ethiopia

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DECLARATION

I, the undersigned, declare that this thesis is my original work, prepared under the guidance of Wubshet Bekalu (PhD). All sources of material used for the thesis have been duly acknowledged. I further confirm that the thesis has not been submitted either in part or in full to any other higher learning institution for the purpose of earning any degree.

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ENDORSEMENT

This thesis has been submitted to St. Mary's University, School of Graduate Studies for examination with my approval as a university advisor.

Advisor	Signature
St, Mary's University	May, 2018

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Abbreviations

AACRTB	Addis Ababa City Road and Transport Bureau
CRGE	Climate Resilient Green Economy
NMT	Non-Motorized Transport
PCM	Project Cost Management
PCOMM	Project Communication Management
PHRM	Project Human Resource Management
PIM	Project Integration Management
PM	Project Management
PMBOK	Project Management Body of Knowledge
PMI	Project Management Institute
PPM	Project Procurement Management
PQM	Project Quality Management
PRM	Project Risk Management
PSM	Project Scope Management
PSTM	Project Stakeholder Management
PTM	Project Time Management
RII	Relative Importance Index
SPSS	Statistical Package for Social Sciences
UNECA	United Nations Economic Commission for Africa
UN	United Nations
WBS	Work Breakdown Structure
WHO	World Health Organization

ABSTRACT

A guide to the Project Management Body of Knowledge (PMBOK) 5th edition identifies ten knowledge areas that project managers should focus and organization should follow to ensure the effective implementation of all projects. However, most organizations undertake projects without necessarily adhering to these standard project management practices that leading to the failure of most projects. The Ministry of Transport in coordination with AACRTB made an initial attempt to encourage and facilitate cycling through the development of designated cycle tracks and bicycle rental program. The project is implemented in three selected areas: Imperial-Atlas, CMC - Summit and Hayat roundabout -chafe/Hayat condominium. The purpose of the project was to explore the viability of urban cycling and cycle sharing in Addis Ababa. Since implementation in 2015 the project has encountered several challenges. The purpose of this study was to investigate the extent to which AACRTB cycling project adopt Project Management standards in the implementation of the project, to investigate the processes used in the implementation of the AACRTB cycling project, to determine the causes of project failures. The major findings of the research indicated that standard project management practices are mostly implemented, but some shortcoming were identified by respondents including Project Human Resource management, Project Communication Management, Project Risk Management and Project Stakeholder Management. Likewise project management process were adopted in the implementation, without necessarily adhering of those knowledge area contributing for the failure of the project and finally it was highly recommended that five project management processes groups and ten knowledge areas must be carried out effectively to ensure high success rate of projects.

Keywords: *Project Management, Non-Motorized Transport, Cycling, Project Success, Project Failure, Addis Ababa City Road and Transport Bureau, Ethiopia.*

CHAPTER ONE: INTRODUCTION

1.1.Background of the study

In today business world, projects have been considered as an important means to achieve organizations strategic objectives. And it is not exaggerating, if it is said that projects are part of our daily lives. For instance every day we go to our works, schools, shops or anywhere else; and to do so, we usually decide earlier our objectives and in this case it will be our destinations. Then, we plan our trips by allocating the suitable resources from time, money, and type of transportation that we need to use. Finally we proceed or execute our plans to obtain our objectives. These three simple stages for our daily basic activities not surprisingly are the main phases for any project life cycle. Although, this example is visualizing project as component of some basic sequential activities that one follows another in order to achieve certain objectives; in reality, the elements under these activities which will be discussed in details later on are a lot more comprehensive than it seems to be in the example. Regardless to project's stages and their details, the main fact that we could observe from this example that project is basically a dynamic transportation device which people use to reach to their goals and aims. Thus, many of the modern organizations have held this same point of view and strongly supported and considered as a key point for their success. In other word, they believe that project concept is the new business fashion for developing their companies organizationally and financially.

Hence for the purpose of reducing green gas emissions, currently, different climate resilient green economy (CRGE) projects are being implemented by different governmental offices. Share the road project (Development of walking and cycling faculties for urban transportation of Addis Ababa) is one of the non-motorized transport project implemented by Addis Ababa City Road and Transport Bureau (AACRTB) in the following areas: Imperial-Atlas, CMC - Summit and Hayat roundabout -chafe/Hayat condominium (see Figure 1.1).

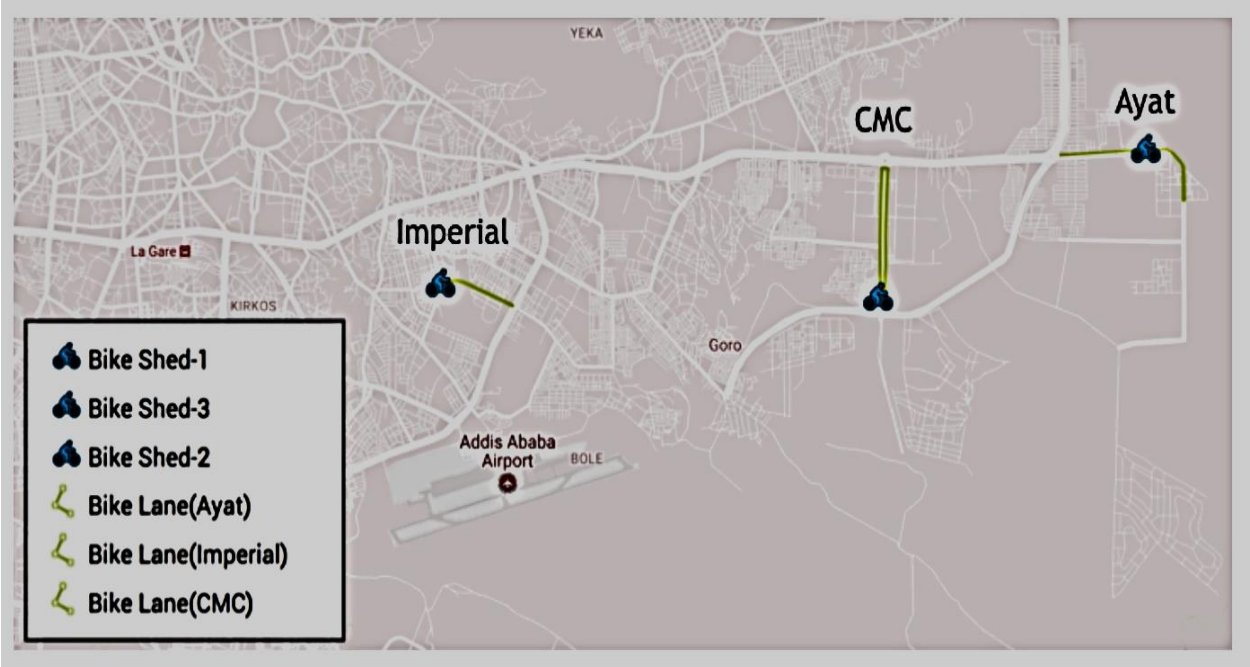

Figure1.1: project locations.

Source: Adopted from Addis Ababa Non-Motorized Transport strategy (2018).

The project has been sets seven outputs to deliver

1. Construction of cycle facilities: It contains detail implementation study and action plan based on the best practice taken from the world's most cycle friendly cities or countries, compatibility and topographic analysis of the selected sites, construction of physical cycle facilities on the ground.
2. Procurement of Cycles: It contains detail cycle specifications and preparation of bidding documents.
3. Procurement of Vegetation or trees for planting:
4. Preparation of Business model, organizing enterprises and training
5. Preparation of Non-Motorized Transport Design Manual
6. Preparation and Installation of City benches and cycle racks
7. Cycle logo and sticker preparation

The purpose of the project was to explore the viability of urban cycling and cycle sharing in Addis Ababa. The total project cost amounted to USD 935,500. Since implementation in 2015 the project has encountered several challenges.

Above and beyond Project Management is the application of knowledge, skills, tools and techniques to project activities to meet project requirements (PMI, 2013). Project

management is accomplished through the application of the processes of initiating, planning, executing, monitoring and controlling and closing. A project is temporary endeavor undertaken to create a unique product or service (PMI, 2013). The temporary nature of projects makes it have the characteristic of having a definite beginning and an end which is sharply contrasted by operations which are repetitive, permanent or semi-permanent functional work to produce products or services. The primary challenge of project management is to achieve all of the project goals and objectives whilst meeting the demands of project constraints. Phillips (2003), outline typical project constraints as scope, time, cost and quality. A secondary objective is to optimize the allocation and integration of inputs to meet pre-defined objectives. These challenges ran through project management practices in several industries and become a hindrance to achieving most objectives and results required from the execution of projects.

1.2. Background of the Organization

Addis Ababa, the capital city of Ethiopia, is a vibrant and fast changing urban metropolitan city, with an estimated population of more than 4 million. The relatively rapid economic growth and population explosion in the City in recent years, has resulted in serious challenges and stresses to the socio-economic infrastructure, including on its transportation network. Addis Ababa hosts headquarters of several international organizations like the African Union and the UNECA (Economic Commission for Africa). Numerous international conferences frequently take place in the City. Addis Ababa is often referred to as the political capital of Africa.

People have been moving from place to place to carry out their day-to-day activities. To facilitate their movement, people use different ways of transportation including road, air, water, train etc. It is an accepted fact that of all modes of transportation, road transport is easily accessible and closes to people. According to WHO (2011), road transportation provides benefits both to nations and to individuals by facilitating the movement of goods and people. It enables people to have increased access to jobs, markets, education, recreation and health care and also indicate that road transportations have major advantages compared with others means of transport due to its flexibility, that allow people to run business from door-to-door over short distances at the most competitive prices. In Africa, over 80% of goods and people are transported by roads and in Ethiopia road transport

accounts for over 90% of freight and passenger movements in the country every year. Therefore, road transportation has a direct connection with the day-to-day activities of people, especially in large cities where the distance is too far to cover on foot or by bicycle within a reasonable time.

According to the Urban Transport study of Addis Ababa, Walking is the dominant form of urban mobility it is estimates comprise around 70 %. This largest majority of passengers are daily exposed to CO_2 emission, noise pollution and other environmental related problems often resulting from the disorderly urban traffic.

In the last ten years, the total road coverage of Addis Ababa has increased from 11% to 17%, however regardless of the increase, only few attempts have been so far done to resolve the challenges of Non-Motorized mobility problems, such as tree shades, rest sets, and other furniture's of urban road facility that stimulate people to prefer walking and cycling modality.

The sustainable development of Addis Ababa transport system critically requires the development of an integrated transport system geared towards ensuring the mobility, accessibility and safety to all road users; motorized as well as non-motorized transport (NMT) users. Therefore it requires mitigating the ever increasing urban environment hazards by discouraging the motorized transport usage for short distances and alternatively creating an environmentally friendly non-motorized mobility for the mass of the urban residents.

The Addis Ababa City Roads and Transport Bureau (AACRTB) is the higher authority of the city of Addis Ababa for the governance of the transport system of the City. As the sector had weaker institutional capacity, the Bureau along with several partners (including international financers) has taken the initiation to transform the transport system of the City. Thus this project is one of the initiations stated previously.

1.1.Statement of the problem

The Project Management Institute (PMI, 2013), the body that regulates project management practices, worldwide describes the processes of initiation, planning, execution, monitoring and controlling and closing as the best procedures to ensure the successful execution of all

projects. Ideally, projects must go through all the processes mentioned above with the expect supervision of certified project managers to be certain of their good implementation. Indeed in some countries projects that are not taken through all these processes and supervised by professional project managers do not get implemented.

The AACRTB undertake a number of projects either funded by its own budget from the City Government of Addis Ababa or donors such as the World Bank and French Development Bank (AFD) or other international financers.

For this project they purchase 210 cycles (See Figure 1.2) and distribute to three small scale enterprises that have ten members. But the project has challenges and goes beyond the expectation of the Bureau. Some of the challenges and obstacles includes:-

- Vehicles parking on the dedicated cycling lane (See Figure 1.3)
- Lack of Traffic Police enforcement
- Street venders on the dedicated cycling lane (See Figure 1.4)
- Cycling theft
- Damaging cycling infrastructures (See Figure 1.5) and

The Bureau in most cases is constrained by time and cost in executing its projects thus there is always the problem of foregoing the project management practices. Again, there is not much literature on whether the Bureau follows the laid down project management practices in the implementation of its projects in order to guide the implementation of future projects.

Since implementation of this project in 2015 the project has encountered several challenges and far deviating from the interest and intentions set at its onset. It is in view of this that this study seeks to investigate the Project Management Practices used to execute projects and critical failure factors in the cycling project of AACRTB. It will also be expedient to investigate whether the failure of projects or project deliverables are caused by inappropriate project management processes used. Thus the study will seek to find out the factors that might cause a project or it's deliverable to fail.

The purpose of this study was to investigate the extent to which project management processes are adopted in the implementation of project. It will also to investigate the failure factor of the project. It will also be expedient to investigate whether the failure of projects or project deliverables are caused by inappropriate Project Management processes used. Thus the study will seek to find out the factors that might cause a project or it's deliverable to fail.

The method used to carry out this research was solicitation of information from the project owner, managers who supervise project, secondary data from magazines and mass media archives and small-scale cycling renal operators through questionnaires and interview.

The contribution of this research paper towards knowledge advancement is at first initiate me to do farther comprehensive research on the subject area and to deliver a little message for those researchers and academicians to investigate farther on it.

1.2.Research Questions

The study was guided by the following questions and the major research question this study will seek to address is whether project management practices are followed in project Implementation in the AACRTB. In a much more specific sense the study tends to address the following question:

1. What is the level of adoption of standard Project Management practice in AACRTB cycling project?
2. What are the causes of project failures in AACRTB cycling project?
3. To identify the relationship between project management knowledge area and critical success factors?

1.3.Research Objectives

1.3.1. General Objective

Generally, the objective of the research is to investigate the project management practices engaged in by the AACRTB Cycling project in execution of the project.

1.3.2. Specific Objectives

Specifically, objectives of this study were:

1. To examine whether the AACRTB cycling project adopt standard Project Management practices in the implementation of the project.
2. To investigate the processes used in the implementation of the AACRTB cycling project.
3. To determine the causes of project failure in AACRTB cycling project.

1.4. Scope and Limitation

Among the factors that affect the precision of any study, the availability and reliability of the information it employs is very important. This study mainly uses the information collected from AACRTB. So it is important to state that the main objective of this study is limited to investigating the project management practices employed in the execution of projects in the AACRTB Cycling project with a link to project successes and failures. It does not seek to execute other projects running within the Bureau.

1.5. Significance of the study

The major relevance of this study is to enable me investigate whether the processes of Project Management which comprises initiation, planning, execution, monitoring and controlling, and closing are employed for projects implementation in the AACRTB cycling project. In addition, findings from this study will have the following significances

a) Guide Engineers and Project Managers in AACRTB in the execution of projects and thereby increase the success rate of projects and project deliverables.
b) This study will serve as an additional literature on Project Management Practices with particular case of AACRTB cycling project for reference in the University.
c) The study will also help to stimulate further investigation by AACRTB for further actions.

1.6. Organizations of the Thesis

The research study has been organized into five chapters: Introduction, Literature Review, Research Methodology, Results and Discussion, Summary, Conclusion and Recommendations and Appendices. Chapter one which introduces the work contains the background to the study which was discussed about key concepts of my research, statement of the problem that describes the motives behind me to conduct this research, Research objectives, scope and limitation of the study, significance of the study in terms of contribution to the studied organization and others.

Chapter two focuses on the review of relevant literature in previous works done on this topic.

The various methodologies for the research make up the third chapter. It focuses on the

research setting, population for data collection, sampling size and sampling techniques, research design, data collection and analysis procedure. The fourth chapter will analyze and discuss all results of all data collected and chapter five draws summary of findings, conclusions and recommendation.

CHAPTER TWO: LITERATURE REVIEW

The chapter reviews relevant literature on cycling as a mode of transport and on project management practices. This section defines the concept of NMT cycling and project management processes. It covers bicycling as a means of urban mobility, the role of bicycle mode in urban transport, the various bicycle infrastructure facilities, the challenges/constraints of bicycle mode of transport as well as policy and legal framework on NMT, an overview of a project, strategic need of projects, project life cycle, project management process and models, project success and failure factors. It examines as a case study, the bicycle transport system of Netherlands. Lastly it concludes by developing the conceptual framework for the study.

2.1 Theoretical Concept of Non-Motorized Transport – Cycling

According to Alta planning (2005), have attempted to come up with the definition of NMT. This section will explore conceptual frameworks and literature review on NMT and challenges. Non-motorized Transportation (also known as Active Transportation and Human Powered Transportation) includes Walking and Bicycling, and variants such as Small-Wheeled Transport (skates, skateboards, push scooters and hand carts) and Wheelchair travel. Non-motorized transport is a key mode of transport which can be promoted at relatively low cost and with considerable benefits.

Public Transport Bicycle is a fast growing Bike Sharing program in the Netherlands. It is a unique supplement to public transport. It is available at almost all important train stations (180 stations). It is very easy to pick-up a bicycle from automatic dispensers or from a staffed rental location. Bicycles are always accessible at least during public transport operation hours and in many places 24 hours a day 7 days a week. The Bike Sharing program leads to better accessibility of city centers during peak-hour by reducing car use and parking problems. It thereby also reduces negative environmental effects. And last but not least: riding a bicycle is not only healthy for the environment; it is also good for personal health.

Farther more bicycles serve as a means of transport of goods and people in per-urban and rural areas, while in urban areas, the recreational purpose of cycling is important (UN-HABITAT, 2010).

2.1.1 NMT User Requirements

According to the Federal Democratic Republic of Ethiopia, Ministry of Transport, Transport policy of Addis Ababa (2011) stated that "The Government shall support the promotion of non-motorized transport (NMT) service and make it favored mode" and Provide infrastructure to non-motorized transport (pedestrian and bicycle) and particularly provide bicycle parking (park and ride) along main terminals".

Infrastructure refers to conducive surrounding environment such as shades; landscaping; clean streets; and parks along routes.

2.1.2 Bicycling as a means of Urban Mobility

To achieve the sustainable transport, scholars recommended that the provision of universal access to sustainable transport through support for safe, affordable public transport and safe attractive facilities for walking and bicycling. According to Schwartsz (2018), cycling may not only be a healthy way to get around a city, helping to reduce traffic congestion and pollution but it is often the fastest and most reliable way to get around a city too. Schwartsz concludes that there are only two reliable methods of transportation that can consistently transport you to a destination on-time: bicycling and walking. Bicyclists can hardly be caught up in traffic snarl ups due to the ability of the bicycle to maneuver and given that it requires only a narrow space to travel along.

Bicycles offer freedom and mobility that you often cannot get with automobiles, and speed and efficiency that you cannot achieve by walking. When it comes to the cost of bicycle transport, the main cost is procurement of the bicycle itself. Other costs that come with it are maintenance costs due to wear and tear. Servicing of the bicycle is cheap as it generally involves greasing the moving parts and inflating the tires when necessary.

Time taken to travel using a bicycle depends on the speed that the rider can comfortably achieve with it. Factors determining this include the type of bicycle, the slope of the terrain and the road surface (UNHABITAT, 2010).

2.1.3 Role and Benefits of Bicycle as a means of NMT

Non-motorized transport is available to almost everyone. Scholars agree that the majority of non-motorized classes of transport modes are healthy, non-polluting, versatile and reliable and they encourage local movement and hence support local community facilities. A shift

away from private car use to non-motorized transport, including improving accessibility for the mobility-impaired people, has a key role to play in using the existing road network more efficiently and delivering significant potential economic and environmental benefits to society, alongside tangible health and lifestyle benefits for individuals (Smart, 2004).

Internationally, NMT has enticed an increased attention as an environmentally sustainable means of transport, reason because bicycles do not cause noise and air pollution. Introduction of more cycling preferences in urban areas in place of cars could ease congestion on our roads and majorly reduce on energy consumption from travel activity. According to UN-HABITAT (2010), promoting NMT as mode choice of travel will also make a significant contribution to reducing greenhouse gases as well as other emissions. NMT mode of transport e.g. cycling has been experiencing a noticeable popularity as an everyday means of transport and as a recreational or holiday activity (Todd, 2014). Non-motorized travel provides many indirect benefits (Todd, 2014). Todd confirms that a community designed for walking and cycling must be compact. In this respect so many destinations are within convenient distance of each other, connected with streets that allow direct travel, designed at a human scale. In addition, the design has to have functional and attractive sidewalks and paths, effective strategies to control traffic speeds, and must make users feel safe. Increased non-motorized travel tends to improve community cohesion in terms of the quality of neighborly interactions which has positive effect on the social fabric, security and aesthetics. Finally, Todd (2014) concludes that NMT or Active transportation can provide various types of benefits, depending on their impacts, as summarized in the Table 2.1 below:

Table 2.1. NMT potential Benefit

	Improved NMT Conditions	Increased NMT Transport Activity	Reduced Automobile Travel	More Compact Communities
Potential Benefits	• Improved user convenient and comfort • Improved Accessibility for non-drivers , which supports equality objectives • option value • Higher property value • Increased security	• user enjoyment • Improved public fitness and health • Increased community cohesion (positive interaction among neighbors due to more people walking on local streets) which tends to increase local security	• Reduce traffic congestion • Road and parking facility cost savings • consumer savings • Reduced chauffeuring burdens • Increased traffic safety • Energy conservation • Pollution reduction • Economic development	• Improved accessibility, particularly for non-drivers • Transport cost savings • Reduced sprawl costs • Open space preservation • More livable communities • Higher property values • Improved security

Source: Adopted from Todd L, (2014) table

Above all, it is critical to focus on creating an environment where people feel safe to cycle, through measures such as reduced traffic speed and provision of a well-planned cycle infrastructure. In doing this, some of the risks associated with cycling can be minimized and this will help to ensure that people who try cycling will continue throughout their lives.

2.1.4 Challenges facing Cycling as a Mode of Transport

FABIO (2004) Further explains cyclists face major problems related to the lack/inadequacy of road infrastructure, scarcity of parking facilities, safety and security of cyclists and harsh weather conditions. Cycling related Challenges are categorized into the User-Cyclist, institutional and the infrastructure/facilities provision based as presented below:

i. Cyclist (User) Related Challenges

Cycling as a means of transport has myriad of challenges which include safety and security, harsh weather conditions and poor inter-modality.

ii. Safety and Security

The world over deaths resulting road accidents are on the rise. Safety and security of road users is of paramount importance in all parts of the world. This made on sustainable development to note that the development of the transport sector within the transition to a greener economy would be well served by the adoption of a Sustainable Development Goal specific to transportation

According to FABIO (2004), most African countries do not have a good road infrastructure network for cyclists. If there are cycle paths, most are poorly maintained, dirty and not entirely safe. Lack of cycling lanes forces cyclists to share road space with motorized vehicles or with pedestrians. This normally causes accidents and injuries. The inadequacy of the cycle tracks makes cyclists feel unsafe and dissuades them from increasing their bicycle usage, primarily in urban areas. Separate infrastructure for bicycles is essential to avoid conflicts and potentially dangerous circumstances. It is also important to prevent accidents involving vehicles and cyclists by providing traffic control measures and training children and adults in better and proper cycling behavior.

iii. Harsh Weather Conditions

According to Alta Planning (2005), even if weather conditions may seem to be a secondary issue, this is not in fact the case. It is helpful for cyclists to know the weather forecasts related to their journey. They can wear appropriate clothes and/or choose to travel using a combined means of transport. In essence, bikers should be notified of the prevailing weather conditions for better decision-making of a trip to work or any other occupation of the day (Ibid, 2005).

iv. Poor Inter-Modality

Currently, very few major urban settings have equipped their public transport with bicycle tracks (Todd, 2014). Todd further explains that more cities have started to implement bicycle sharing programmers. The idea of offering public bicycles at the main railway or bus stations gives residents a choice of the modes of travel. This also makes it easier to switch from one mode of travel to another within the shortest time possible thus cutting the total travel time by a significant margin.

v. Lack of Bicycle Transport Infrastructure Facilities

According to FABIO (2004), scarcity of bicycle transport facilities such as bicycle parking facilities in urban centers and main attractions discourages cyclists from using their bicycles for regular trips. Parking facilities are also required to allow users to change from bike wear into everyday clothes. Good fully equipped bicycle parking facilities should offer services for cyclists like bicycle accessory shops, bicycles to rent, and lockers (UN-HABITAT, 2010).

vi. Inadequate Infrastructure for Non-Motorized Transport

Cycling is attractive but only a few people cycle to work or school; due to high incidence of road accidents affecting cyclists. Unfortunately, infrastructure for pedestrians and cyclists is not well developed that there is little provision for footpaths, footbridges, zebra crossings, and cycle tracks and even where provided, the same are poorly designed, poorly maintained, and are not secure. The development of infrastructure in both urban and rural areas has tended to ignore NMT.

vii. Policy and Institutional challenges

Based on the AARTB NMT report we understand that one of the bottlenecks in the provision of an optimal and well-functioning NMT in urban and rural transport modes and services in Addis Ababa is the weak management and organization or institutional framework. They further confirm that weak horizontal linkages largely dodge institutional arrangements between the undertaking

departments where each of them works independently or with weak linkages while dealing with the same problem. It eventually results to uncoordinated, un-integrated and poor provision of NMT facilities and services despite immense resources sunk in the efforts.

viii. Policy, Legal and Institutional Framework for NMT in Ethiopia

Transport policy and practice in Ethiopia, and many developing countries focuses on the mobility of vehicles rather than access for the people. Good urban planning helps to create a viable and sustainable transport framework. According to Felipe, (2007), a sustainable urban NMT transport system lies on a strong policy, legal and institutional framework for implementation, monitoring and evaluation.

2.1.5 Case studies

The study considered some other parts of the world where bicycle transport has been adopted as a transportation mode by authorities and cycling infrastructure provided to facilitate this mode.

2.1.6 The Netherlands

Prior to 1900 cycling was not given priority when it came to transportation in the Netherlands. Bicycle usage increased thereafter continuously in the first half of 20th century and reached a peak around1950, before the usage started to decline majorly due to competition from the motor vehicle. One theory as to why the popularity of cycling increase was due to the fact that the cities there were old by the time the motor vehicle came along.

The existing built environment provided a planning constraint which made it difficult to comfortably accommodate the vehicle and so bicycle transport continued to prevail. With the increase of the motor transport between 1950s and early 1970, there was increase in traffic related accidents because the roads were narrow. This endangered cyclists and pedestrians and there was an outcry in the country which led to protests. Around the same time, in 1973, there was the world oil crisis which acted as a factor towards the growth of the bicycle 31 transport. During this period the government declared the need to become less dependent on foreign energy and so government policies began to actively promote bicycle transport as a way of addressing the energy concerns.

Car-free Sundays were launched which went on to making the cities more and more car-free. In the mid-1970 and 1980s, the government developed bicycle transport plans and the planned routes were constructed. Launching of this project was done in The Hague and Tilburg Cities where bicycle use steadily rose to 70% thereafter.

The country integrated safe cycling into the school curricula which is still the practice today. Motorists are routinely trained to be aware of cyclists and there are also fines imposed on cyclists whenever they flout traffic rules.

The promotion of bicycle infrastructure as a matter of policy was not enough and legislators needed to discourage use of motor vehicle by making the car a less attractive form of transport. Taxes and parking restrictions were imposed which made the use of car expensive and inconvenient.

Figure 2.1: Cycling parking in the Netherlands

Figure 2.2: Family Bike in the Netherlands

Source: Photo taken by own, (2017), Amsterdam, Netherlands.

Lessons learnt

Bicycle usage in the Netherlands increased in the first half of 20th century. This late declined as the car pushed its way through to become the preferred mode of transport. Due to increased

traffic accidents, there was protest and people championed against the motor vehicle. This led the government to start promoting the bicycle usage.

The oil crisis of 1973 acted in favor of bicycle transport because the government considered bicycle transport convenient since it did not require foreign energy (fossil fuel energy). Promotion of the bicycle transport was done by providing dedicated cycle track and sensitizing (by training) the masses on merits of use of the bicycle transport. Measures were also put in place to deter people from using the bicycle. As a result the bicycle usage grew and is now among the most important mode of transport in the Netherlands.

2.2 Concept of project Management

2.2.1 What is a Project?

According to PMI's Guide to the Project Management Body of Knowledge (PMI, 2013), project is a temporary endeavor undertaken to create a unique product or science. From the above definition it can be deduced that a project has some basic characteristics: Temporary – temporary means that a project has definite beginning and definite end. The end is reached when the project's objectives have been achieved or it becomes clear that the project objectives cannot be met or the needs for the project no longer exist and the project is terminated. Temporary does not mean short duration, as many projects can last for several years. In addition, the temporary nature of projects does not apply to the product, service or the resultant outcome of projects. Most projects that are undertaken or create a national monument will produce results that will last for centuries. (PMI, 2013), suggest that the temporary nature of projects just means that they are not repetitive or continuous activities. A project is normally undertaken to create a specific (unique) deliverable, which can be a product (good), services or some results. In effect projects can create:

1) A produce or artifact that is quantifiable that can either be an end item or a component item.
2) A capability to perform a service such as business function supporting production or distribution

3) A result, such as outcomes or documents, for example a research project develops knowledge that can be used to determine whether or not a trend is present or a new process will benefit society.

Uniqueness is an important characteristic of project deliverables because it distinguishes every deliverable from another similar purpose. For example there are many office buildings developed from projects but each facility is unique or distinct. (PMI, 2013), Progressive elaboration of projects refers to developing in steps and continuing by increments. For example a projects scope will be broadly described earlier in the project and made more explicit and detailed as the project team develops a better and more complete understanding of the objectives and deliverables. Progressive elaboration indicates that projects are undertaken by gradual build of steps and activities until the final deliverable is achieved.

A project is a combination of human and nonhuman resources pulled together in a temporary organization to achieve a specified purpose. A project, then, can be defined as possessing the following characteristics:

1. A defined beginning and end (specified time to completion).

2. A specific, preordained goal or set of goals.

3. A series of complex or interrelated activities.

4. A limited budget

2.2.2 Need of Projects

Projects are means of addressing needs that cannot be addressed within the organizations, normal operational limits. Projects are therefore, often utilized as a means of achieving an organization's strategic plan. Projects are typically authorized as a result of one or more of the following strategic considerations:

1) Market demand (e.g., a car company authorizing a project to build more fuel-efficient cars in response to gasoline shortages);

2) Strategic opportunity/business need (e.g., a training company authorizing a project to create a new course to increase its revenues);
3) Social need (e.g., a nongovernmental organization in a developing country authorizing a project to provide potable water systems, latrines, and sanitation education to communities suffering from high rates of infectious diseases);
4) Environmental consideration (e.g., a public company authorizing a project to create a new service for electric car sharing to reduce pollution);
5) Customer request (e.g., an electric utility authorizing a project to build a new substation to serve a new industrial park);
6) Technological advance (e.g., an electronics film authorizing a new project to develop a faster, cheaper, and smaller laptop based on advances in computer memory and electronics technology); and
7) Legal requirement (e.g., a chemical manufacturer authorizing a project to establish guidelines for proper handling of a new toxic material). (PMI, 2013),

2.2.3 Project Life Cycle

Projects like an organism develop and change continuously. Projects go through different phases in what is termed the project life cycle. Most project management books divide the life of a project into four phases. In one instance Thamhain and Wilemon (1995) divides a project's life into project formation, project build up, main program phase and phase unit, while Adams and Brandt (1983) categorizes projects into conceptualization, planning, execution and termination . The (PMI, 2013), describes the phases as initiation or Birth phase, in which the outputs and critical success factors are defined, the Planning Phase, characterized by break down the project into smaller parts/tasks, An Execution phase in which plan is executed and lastly Closure or Exit phase, that marks the completion of the project. The essence of grouping project activities into phases is to enable the project manager and the project team to effectively plan and organize resources for each activity, and also objectively measure achievement of goals and justify their

decisions to move ahead, correct or terminate. It is important to distinguish the phases of a project from the five project management process groups.

Figure 2.3: Project life cycle

Source: (PMI, 2013)

2.2.4 Project Management Processes

Project Management is accomplished through processes, using project management knowledge, skills, tools and techniques that receive inputs and generates output. The basic processes adopted by project managers in all projects include initiation, planning, execution, monitoring and controlling and closing. (PMI, 2013), These five processes have clear dependencies and are performed in the same sequence on each project.

Initiation The initiation process group consists of the processes that facilitate the formal authorization to start a new project or a project phase (PMI, 2013). According to Nathan and Jones (2003), the initiating process determines the nature and scope of the project. The project initiating process also recognizes that a project or phase should begin and the project

management team is committed to do so. It includes developing a proposal for a potential project and analyzes and validates feasibility of the project. The initiation stage produces a plan that encompasses the following areas:

1. A project charter formally authorizing the project.
2. Analyzing the business needs and requirements.
3. Reviewing of the current operations.
4. Financial analysis of the costs and benefits
5. Identification and analysis of stakeholders
6. Appointment of a project manager.

Planning After the initiation stage, the project is planned to an appropriate level of detail. The planning process group helps gather information from sources with each having varying level of completeness and confidence (PMI, 2013). Planning is done for time, cost, resources and risk management during execution. Project planning is an iterative and ongoing process throughout the project's life. Ibbs and Kwak (2002) assert that, the project planning process leads to the development and maintenance of a workable scheme to accomplish the business needs for the project. It includes defining overall scope, identifying planning strategy, developing the work breakdown structure for cost and schedule, refining estimates and analyzing commitments, optimizing the project plan, developing risk management plans, and organizing the project team to establish a project driven organization environment. According to Kerzner (2003), the planning process consists of

1. Determining how to plan (example detailed planning)
2. Developing the scope statement
3. Selecting the planning team
4. Identifying deliverables and creating a Work Breakdown Structure (WBS)
5. Identifying the activities needed to complete those deliverables and networking the activities in logical sequence
6. Estimating the resource requirements for the activities
7. Estimating time and cost for the activities

8. Developing the schedule
9. Developing the budget
10. Risk planning
11. Gaining formal approval to begin work.

Execution: Execution consists of the processes used to complete the work defined in the Project Management Plan to accomplish project requirements (PMI, 2013). It involves coordinating people and resources, as well as integrating and performing the activities of the project according to the project management plan. Actual work on the project is done during the execution process. The (PMI, 2013) describes the activities under execution as

1. Direct and manage project execution
2. Perform quality assurance
3. Acquire project team
4. Develop project team
5. Information distribution 6. Select sellers.

Monitoring and Controlling: Monitoring and controlling consist of those processes performed to observe project execution so that potential problems can be identified in a timely manner and corrective action taken when necessary. (PMI, 2013), the project controlling process ensures that project objectives are met by measuring progress and taking corrective actions when necessary. It includes collecting project progress status, analyzing variances, and communicating project status. The key benefit in monitoring and controlling is that the project performance is observed and measured regularly to identify variances from the project management plan. Lewis (2006) indicates that monitoring and controlling activities include;

1. Measuring the ongoing project activities (where we are).
2. Monitoring the project variables (cost, time, scope, quality) against the project management plan.
3. Identify corrective actions to address issues and risks properly.

4. Influencing the factors that could circumvent integrated change control so only approved changes are implemented

Closing: Closing includes the processes used to formally terminate all activities of a project or a project phase, hand off complete product to others or close a cancelled project.

The closing process is complete when there is a formal acceptance of the project deliverable and all administrative activities of archiving of files and documenting lessons learned are completed. Project closing consist of:

1. Project close: finalize all activities across all of the process groups to formally close the project or phase of project.

2. Contract closure: Complete all documents on all contracts (PMI, 2013).

2.2.5 Project Management Process Model

According to (PMI, 2013), Project management process are a continuous process and not as a disconnected one that described by most of the project management experts that there is no a single way of managing a project. Too this end project management model is an important source of reference for an organization applying project management practices and processes. This is because the model accounts for successful execution of projects by organizations. Project management process basically involves five levels. These are illustrated in the model below the application of project management process is iterative and many processes are repeated during the project and the deliverables of one process will be an input for the other.

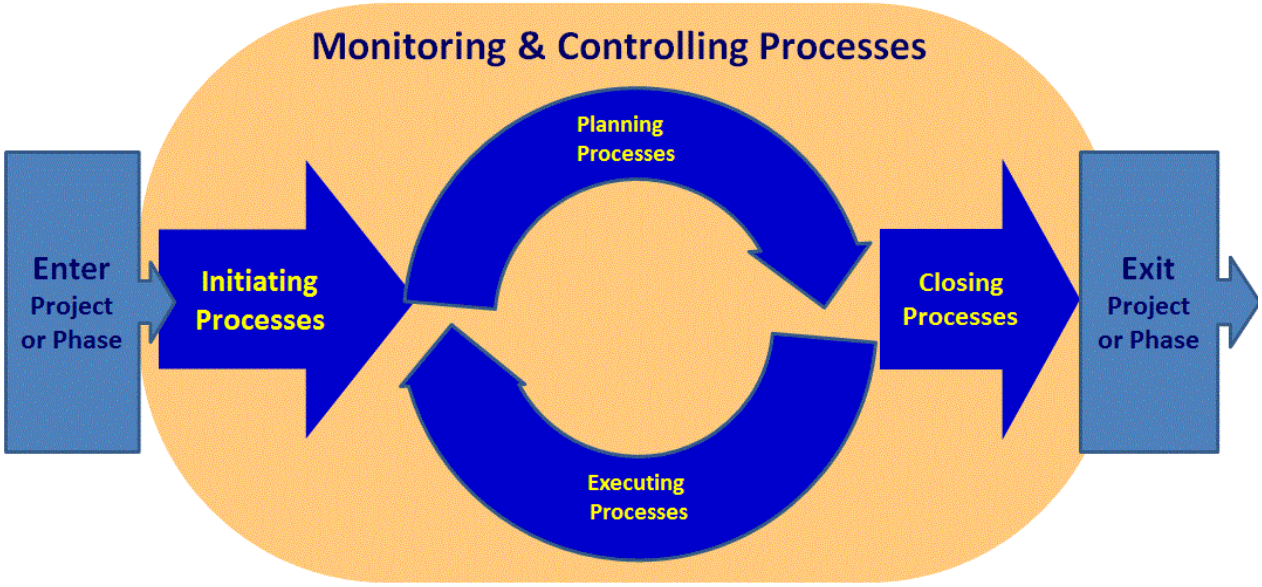

Figure 2.4: Project management process model.

Source: (PMI, 2013)

The project management model advanced by Ibbs and Kwak (2002) deals with the following project management knowledge areas.

1. Project integration management
2. Project scope management
3. Project time management
4. Project cost management
5. Project quality management
6. Project human resource management
7. Project communication management
8. Project risk management
9. Project procurement management

Every successful project incorporates these practices to deliver projects in line with the requirements and satisfaction of clients/customers. Below is a discussion of the practices.

Project Integration Management: Project integration management according to (PMI, 2013), involves the efficient and effective coordination of the various elements or components of the project. When properly integrated, project goals and objectives are achieved according to lay down standards. At the integration level, issues such as applications, processes, organizations and project life cycle phases are considered vital. Five basic levels are involved in this stage. In the first level, project plans are not prepared in a structured format and no project management information system is available. At level 2, informal PM tools and practices including basic project plan and project organizational structure are defined. At level 3, formal PM methodology is established and managed. Also, a project management information system is managed to collect, review and distribute necessary project management data. Level 4 involves project control processes that are integrated and coordinated across various knowledge areas and projects. Project managers and supervisors integrate project management information system for multiple projects and they also ensure that control processes are integrated to minimize the risk of scope, cost, schedule, and quality. At the final level (level 5), the entire integration process is planned, optimized and sustained for continuous project management process improvement purposes.

Project Scope Management: This aspect of project management ensures that all the factors and variables for defining and controlling the project are included. These variables or factors are project planning and cost control, tradeoff analysis, project charter preparation, the kickoff meeting, a scope-of-work statement, validation of the project scope, and initiation of a change control process (Ibbs & Kwak, 2002). This stage of project management process involves five levels and each level has its own activities. At level 1, project managers are assigned on an ad-hoc basis and there is no methodology to initiate and control the project. At level 2, informal work breakdown structures and scope-change control processes are defined and available. Also, the PM team agrees to initiate the project informally. At level 3, formal project charter and project manager roles are established. Also, scope planning, definition, and verification processes are managed. At level 4, the product and scope management are integrated to ensure project success. Also, scope-change-control and verification process are documented and integrated. At

level 5, the entire process of scope management is planned, optimized, and sustained for continuous PM process improvement.

Project Time Management: According to Ibbs and Kwak (2002), project time management ensures completing a project on time, which is one of the major challenges for any project manager or organizations involved in projects. Time management in projects includes defining activity and sequence, duration estimation, schedule development, and schedule control. Resource allocation and leveling, network crashing, and fast tracking of projects are used to effectively manage the project schedule.

Regarding time management, in level 1 there is no standard template for project schedules. The process of schedule development is unrealistic and out of sequence. At level 2, an organization is able to develop informal schedules for planning and tracking. Also, activity lists and work breakdown structure templates are defined. At level 3, a variety of scheduling tools and techniques are available for effective schedule control. At level 4, formal schedule control processes and practices are integrated. At level 5, formal project time management tools are optimized and sustained for continuous project management process improvement.

Project Cost Management: Project cost management ensures that the project is completed within the approved budget. Cost management is crucial because cost overruns are common resulting in serious cost problems during project execution. Project cost management includes resource planning, cost estimating, cost budgeting and control, earned value analysis, and depreciation and capital budgeting. There is no cost estimating process available at level 1 because the results would be poor and world most likely exceed the original budget. At level 2, informal cost estimating tools and techniques are available. Cost baseline, resource requirements, and work breakdown structures are defined. At level 3, resource planning and cost estimating are well coordinated and life-cycle costing is used and managed. At level 4, formal resource planning, cost estimating, and budgeting processes are integrated. Also, project stakeholders have wide perspectives of different project cost metrics. Level 5 organizations have formal cost estimating tools and techniques that are optimized and sustained for continuous PM process improvement.

Project Quality Management: Project quality management ensures that the project will meet or exceed all activities of the overall management function. It includes an overview of quality concepts, the cost of quality, statistical process control, variation and measurement, and quality improvement. At level 1, project overruns and reworks are common and expected. There are no quality audits, quality assurances, or quality control processes. Only on-site inspection is conducted for quality checkup. Level 2 organizations have informal quality management systems. Noncompliance issues are addressed through inspection and audits only if it is mandatory by project contract. At level 3, formal quality policies and standards are established. Quality planning and assurance activities are managed and conducted to find quality problems. At level 4, the objectives to achieve high quality project management processes and project quality are integrated. Also, project progresses toward accomplishing project quality are quantified, implemented, and integrated. At level 5, the quality management system is optimized and sustained for continuous PM process improvement.

Project Human Resource Management: Project human resource management ensures the most effective use of the people involved with the project. It is to manage, motivate, and organize people effectively. It includes assigning project roles and responsibilities, reporting organizational relationship, staffing, motivation, leadership, team development, and conflict resolution. Level 1 organizations struggle with the concept of project driven organization resulting in conflicts between functional project managers. At level 2, an informal organizational chart and staffing management plan are defined. At level 3, customers and suppliers are often included as members of the project to receive team building activities and training together.

At level 4, improvements in both individual skills and team capabilities are integrated to perform effectively. Organization is rewarded and recognized by project-oriented teams. At level 5, the human resource management system is optimized and sustained for continuous PM process improvement. (McCauley M. 1993).

Project Communications Management: Project communication management ensures timely and appropriate generation, collection, dissemination, storage, and disposition of project information. Open and clear communications are required among planners, implementers, and all levels of the

organization for project success. It includes having a communication plan, information distribution path, progress reporting, and information sharing system for management and customers. Level 1 organization has no formal project performance reporting systems. The project performance review is often limited to basic status reporting. A project review is only held if requested by a contract. At level 2, an information retrieval and distribution system is defined and informal performance reports and reviews are conducted. At level 3, project data are maintained in a structured format and project performance data are regularly analyzed, reviewed, and revised for project assessment. At level 4, information on scope, schedule, cost, risk, quality, human resource, and procurement are integrated in project performance reporting. Also, communication management processes and techniques are integrated with an organizational structure. At level 5, organizations have a systematic communications management system that is optimized and sustained for continuous PM process improvement (Ibbs & Kwak, 2000).

2.2.6 Successful Project Implementation

In addition to defining the concept of organizational projects, it is important, before attempting any discussion of the steps leading to a successful project, to describe just exactly what a "successful project" is. Project implementation success has been defined many ways to include a large variety of criteria. However, in its simplest terms, project success can be thought of as incorporating four basic facets. A project is generally considered to be successfully implemented if it;

1. Comes in on-schedule (time criterion).
2. Comes in on-budget (monetary criterion).
3. Achieves basically all the goals originally set for it (effectiveness criterion).
4. Is accepted and used by the clients for whom the project is intended (client satisfaction criterion).

By its basic definition, a project comprises a defined time frame to completion, a limited budget, and a specified set of performance characteristics. Further, the project is usually targeted for use by some client, either internal or external to the organization and its project team. It seems reasonable, therefore, that any assessment of project implementation success should include these four measures stated above. (Pinto et al, 1987)

2.2.7 Project Success Factors

According to the 1994 Standish CHAOS Report, there are top 5 factors found in successful projects. These include:

1. User Involvement
2. Executive Management Support
3. Clear Statement of Requirements
4. Proper Planning
5. Realistic Expectations

Jiang et al (1996), in another literature study, list 13 other factors as contributing to the success of projects. His lists of factors include:

1. Clearly defined goals (including the general project philosophy or general mission of the project, as well as commitment to those goals on the part of the team members).
2. Competent project manager. The importance of initial selection of skilled (interpersonally, technically, and administratively) project leader.
3. Top Management Support. Top or divisional management support for the project that has been conveyed to all concerned parties.
4. Competent project team members. The importance of selecting and, if necessary, triaging project team members.
5. Sufficient resource allocation. These are Resources in the form of money, personnel, logistics, etc.
6. Adequate communication channels. Sufficient information is available on the project objectives, status, changes, organizational coordination, clients' needs, etc.
7. Control Mechanisms. (Including; planning, schedules, etc.). Programs are in place to deal with initial plans and schedules.
8. Feedback capabilities. All parties concerned with the project area able to review project status, make suggestions, and corrections through formal feedback channels or review meetings.

9. Responsiveness to client. All potential users of the project are consulted with and kept up to date on project status. Further, clients receive assistance after the project has been successfully implemented. 10. Client consultation. The project team members share solicited input from all potential clients of the project. The project team members understand the needs of those who will use the systems.
10. Technical tasks. The technology that is being implemented works well. Experts, consultants, or other experienced project managers outside the project team have reviewed and critiqued the basic approach.
11. Client Acceptance. Potential clients have been contacted about the usefulness of the project. Adequate advanced preparation has been done to best determine how to sell the project to the clients.
12. Trouble-shooting. Project team members spend a part of each day looking for problems that have surfaced or are about to surface. Project team members are encouraged to take quick action on problems on their own initiative. According to Johnson (2001), the success rate for projects has actually increased since the original Standish CHAOS report. Johnson attributes this increased success rate to more project people using the Standish "Recipe for Success" that was established in 1998. Johnson tells us that the overall project success rate has increased from 16% in 1994 to 28% in 2000.

2.2.8 Project Failure Factors

The 1994 Standish CHAOS report also lists the following factors as contributing to the failure of projects:

1. Incomplete Requirements
2. Lack of user involvement
3. Lack of Resources
4. Unrealistic Expectations
5. Lace of Executive Support

6. Changing Requirements & Specifications
7. Lack of Planning
8. Didn't need it Any Longer
9. Lack of IT management
10. Technical Illiteracy

Field, (1997) states that, "projects fail too often because the project scope was not fully appreciated and/or user needs not fully understood." Field, (1997) tells us that "MIS projects and associated procurements take place in an environment characterized by the following: Lack of management continuity and an incentive system that encourages overly optimistic estimates of the benefits that can be attained from doing the project.

2.2.9 Project Success criteria

In an integrative literature review about project success criteria, scholars including the so called "Iron triangle" and that is measurement of cost, quality and time in their criteria of measurement of development projects (Atkinson, 1999; Wi and Jung, 2010). Though project conformity to cost, quality and time constraints have been indicative for project success for a long time, however, scholars like Shenhar et al., (2001) argue that measurement of project success should go beyond the iron triangle to include project efficiency, impact to customer, business and direct success, and contribution for the future.

Many scholars referred to defining criteria to measure project success as a difficult and controversial task; this is due to the varying perceptions that lead to disagreement about the project success (Baccarini, 1999; Liu & Walker, 1998) while other scholars attempted to identify certain dimensions that constitute project success.

Pinto and Mantel (1990) proposes three dimensions to define project success. The first is the efficiency of the implementation process, in terms of the project team performance, staying on project schedule and budget, meeting project goal and maintain smooth team relationship.

The second dimension examines the quality of the project deliverable and value added as perceived by project team, and the third and last dimension examines the client satisfaction.

Thought these dimensions are essential for project success and can act as performance indicators, but they are missing the relevance of the project to the targeted audience and projects aligned with the country agenda.

Baccarini (1999) proposed that project success consists of two components, product success and project management success. The product success component is concerned with achieving the strategic objective and goal of the project, as well as satisfaction of key stakeholders, while project management success focuses on how the management process was conducted and whether it take into consideration the traditional time, cost and quality aspects at the compilation of the project. This separation of product success and project management success is critical. It sheds light on the independency of the success of project management process from the success of the final product. In general the success of project management does not necessarily mean product success and vice versa.

The model of lka et al. (2012) for project success criteria of international development project includes

1. **Relevance** in meeting needs and priority of the country
2. **Efficiency** of cost while meeting project objectives
3. **Effectiveness** which is the extent to which the project meet the desired objectives
4. **Impact** which is the indirect positive or negative changes generated by the project and
5. **Sustainability** where the benefits of the projects are institutionalized and well continued after project compilation

This model acknowledges the different factors that affect the success of development projects and the unique nature of such projects in light of country priority and sustainability of the project.

2.3 Conceptual Framework of the Study

Developing a conceptual framework will help the researchers to hypothesis and test certain relationships in order to improve the understanding of the situation. The research conceptual

framework presents a holistic picture of the critical success factors (CSFs) that influence the project success criteria in (PMI, 2013). The content of the framework consists of three essential components. The first component of the research conceptual framework is the project management process ten knowledge areas. The second component of the research framework is the five project management process groups. The last one is success factors. Figure 9 shows the research conceptual framework.

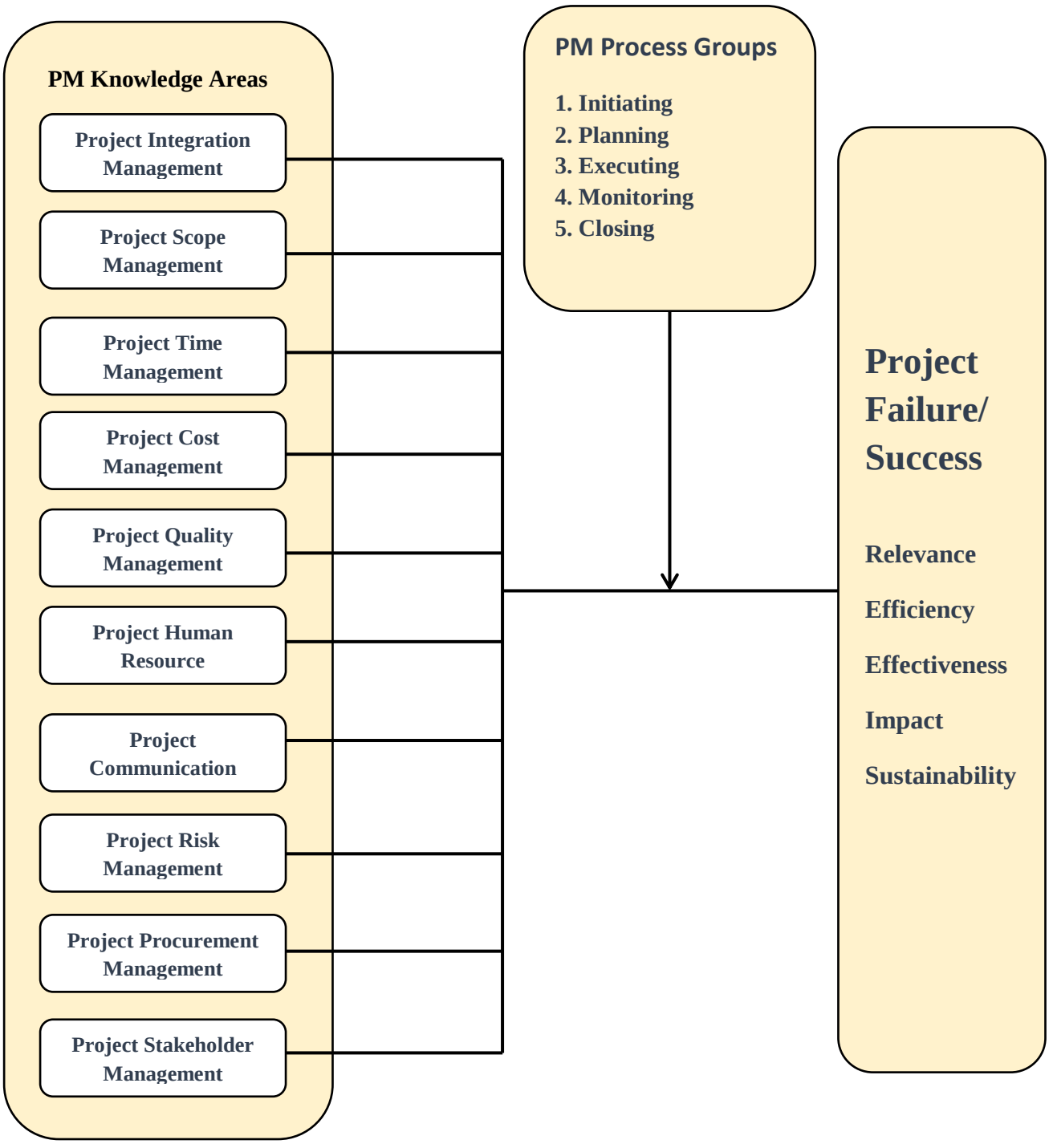

Figure 2.5: Conceptual framework of the study.

Source: Adopted from (PMI, 2013)

CHAPTER THREE: RESEARCH METHODOLOGY

The purpose of this chapter is to introduce the research strategy or procedure applied in this study. It describes the research methodology, the sample selection procedure, the procedure used in designing the instruments, collecting the data and finally gives an explanation of the statistical procedure used to analyze and present the data.

3.1. Research Approach

The approach that is used in a research defines the design of the research process. For this research uses pragmatic approach because it involves using the method which appears best suited to the research problem and not getting caught up in philosophical debates about which is the best approach.

Pragmatic researchers therefore grant themselves the freedom to use any of the methods, techniques and procedures typically associated with quantitative or qualitative research. They recognize that every method has its limitations and that the different approaches can be complementary.

They may also use different techniques at the same time or one after the other. For example, they might start with face-to-face interviews with several people or have a focus group and then use the findings to construct a questionnaire to measure attitudes in a large scale sample with the aim of carrying out statistical analysis.

Depending on which measures have been used, the data collected is analyzed in the appropriate manner. However, it is sometimes possible to transform qualitative data into quantitative data and vice versa although transforming quantitative data into qualitative data is not very common.

Being able to mix different approaches has the advantages of enabling triangulation. Triangulation is a common feature of mixed methods studies. It involves the use of a variety of data sources (data triangulation).

3.2. Research Design

The study utilized a survey design. This design was appropriate because the study sought to investigate project manager's views or opinions regarding some of the project management implementation of the AACRTB on cycling project. This research study will adopt a descriptive survey research design in an attempt to investigate the factors that why cycling project failed. A descriptive survey research design allows for an in-depth analysis and understanding of a particular phenomenon as it exists in the present condition (Cooper and Schindler, 2008). In descriptive survey research design, objectives are predetermined allowing data collection relevant and sufficient to the study problem (Kothari, 2004). This approach was chosen because the study combines both quantitative and qualitative data collection procedures, allows me to gather exhaustive information in a way that reduces cost of the data collection.

3.3. Data Source

Two different types of data were used. These were primary and secondary data.

Primary data: are those which are collected a fresh and for the first time thus happen to be original in character.

Secondary data: are those which have been collected by someone else earlier and which have already been passed.

Primary data in this study comprised data collected via questionnaire and used for analysis while secondary data was sourced from the various publications on the cycling project and project management.

3.4. Data Collection Instrument

The researcher sought permission from the head of AACRTB by explaining the purpose of the study to the head of the bureau and project managers. This was appropriate as required by research ethics. After approval is given, the researcher would seek the consent of the participants who agree to take part in the study before delivering the questionnaires to them to fill.

Participants would be assured of confidentiality of information that they will provide. Data collection would take one week.

3.4.1. Questionnaire survey

Structured questionnaires prepared as the appropriate method for gathering primary data from a number of respondents within a limited time frame. This method will be used to gather both qualitative and quantitative information from project managers and experts that are directly or indirectly involved in cycling project of AACRTB.

Project management Institute (PMI, 2013) standard practice is taken as reference for comparison. Which are the most widely, accepted project management standards, groups the project management process into five Project management groups and ten knowledge areas.

A questionnaire is developed based on the PM process defined in the PMBOK guide under different PM knowledge area and it was adopted from previous research and tailored to organization.

3.4.2. Validity and reliability

The validity of the research was taken into consideration, as close ended questionnaires were developed and checked by benchmarking the literature review in order to generate a valid and comparable response.

Reliability is concerned with the question of whether or not a result is stable (Bryman and Bell, 2007). The idea of reliability is important for measuring. The research method carefully explained thought out this research. The sample selections were done based on non-probability. The people are selected based on the position of responsibility in this area.

3.5. Population and Sampling

3.5.1. Population

The study comprised all project staff in AARTB cycling project that are directly and indirectly involved in the project. A total of 14 project staffs were interviewed.

3.5.2. Sample Size and Sampling Techniques

For this research purposive sampling is used to pick the sample from project staffs who are involved directly and indirectly in AACRTB cycling project. Purposive sampling is a widely used

sampling method which allows a researcher to get information from a sample of population that one thinks knowns more about the subject matter. In this type of sampling, the choice of sample items depends exclusively on the judgement of the researcher and sampling techniques includes hand picking of the subject cases that the researcher thinks that possesses rich information to accomplish the research objective.

A total of fourteen (14) project staff was selected for the study. The expected 14 sample size will not achieve because a participant declined to participate in the study due to work demands and schedules.

3.5.3. Method of Data Analysis

Data collected were screened, coded and entered into the Statistical Package for Social Sciences (SPSS) version IBM SPSS Statistics 24 for windows and Microsoft Excel. Those software were used to facilitate the data analysis process. Using that software's, frequencies, percentages, and tables were generated to explain the data. From the five point Likert group scale used in the questionnaire mean and variance, Relative Importance Index (RII) ware calculated.

CHAPTER FOUR: DATA ANALYSIS AND INTERPRETATION

This chapter presents the results of the study. The results are presented in line with the research objectives stated. However, demographic background of the respondents would be presented first.

4.1. Demographic Information of the respondents

Relevant demographic data such as Address, respondents educational level, Age groups and service years are where collected and analyzed below

Table 4.1: List of respondents in the survey on their demographic information.

Attribute of respondents		Number of respondents	Percentage of respondents
Address	Bole	5	35.7
	Nefas Silk Lafto	2	14.3
	Yeka	2	14.3
	Addis Ketema	1	7.1
	Akaky Kality	1	7.1
	Gullele	1	7.1
	Kirkos	1	7.1
	Kolfe Keranio	1	7.1
	Total	14	100
Respondents Educational level	First Degree	4	28.6
	Second Degree	10	71.4
	Total	14	100
	Between 25 up to 35 years	9	64.3
	Between 35 up to 45 years	4	28.6
	More than 45 years	1	7.1
	Total	14	100
Service year	Less than 1 years	2	14.3
	Between 1 up to 2 years	4	28.6
	Between 3 up to 5 years	5	35.7
	More than 6 years	3	21.4
	Total	14	100

Source: own survey (2018).

When you referring table 4.1 shows that appropriately most of the respondent lived in Bole sub city 5(35.7%) within cycling project site that will create an opportunity to observe the project progress. The educational level indicates that 10 (71.4 %) of the respondent have second degree, and the remaining 4 (28.6%) hold first degree. The age group shows that between 25 up to 35 years 9(64.3%), between 35 up to 45 4(28.6%) years and more than 45 year 1(7.1%).

The respondent service year shows that Less than 1 years 2(14.3%), between 1 up to 2 years 4 (28.6), between 3 up to 5 years 5(35.7%) and more than 6 years 3(21.4%).

4.2.Project Integration management

Table 4.2: Parentage frequency distribution for question no 2.1 – 2.6.

Project Integration Management (PIM)		Frequency	Percent
Q2.1 Do you agree that the project have full project charter	Strongly Agree	1	7.1
	Agree	4	28.6
	Neither	3	21.4
	Disagree	6	42.9
	Total	14	100.0
Q2.2 Do you agree that the project have project management plan	Strongly Agree	2	14.3
	Agree	4	28.6
	Neither	3	21.4
	Disagree	3	21.4
	Strongly Disagree	2	14.3
	Total	14	100.0
Q2.3 The project was lead and managed based on the project management plan	Strongly Agree	1	7.1
	Agree	2	14.3
	Neither	5	35.7
	Disagree	5	35.7
	Strongly Disagree	1	7.1
	Total	14	100.0
Q2.4 The project have monitored and controlled based on the project management plan	Agree	3	21.4
	Neither	3	21.4
	Disagree	7	50.0
	Strongly Disagree	1	7.1
	Total	14	100.0

Q2.5 All changes are reviewed, approved and managed	Strongly Agree	1	7.1
	Agree	4	28.6
	Neither	1	7.1
	Disagree	8	57.1
	Total	14	100.0
Q2.6 The project closed properly	Strongly Agree	1	7.1
	Agree	1	7.1
	Neither	1	7.1
	Disagree	8	57.1
	Strongly Disagree	3	21.4
	Total	14	100.0

Source: own survey (2018)

From Table 4.2 the survey result showed that 6 (42.9%) of the respondents witnessed that the project does not have a project charter. For the second question to get an information on the question whether the project have project have a project management plan or not 6 (42.9%) of the participant confirm that the project have a project management plan. As we have seen in Table 4.2 also 5 (35.7%) of the respondents are neutral to judge the project was lead and managed based on the project management plan or not and in the same way 35 (35.7%) of the respondents are disagree on it, 8 (57.1%) of the respondents witnessed that the project does not controlled and monitored based on the project management plan.

Moreover, as per the data described in Table 4.2 the survey result shows that 8(57.1%) of the respondent said that all changes are not reviewed approved and managed properly and 11(78.5%) of the respondents confirm that the project not closed properly.

Finally, according to PMI's Guide to Project Management Body of knowledge, project integration is one of the element of project management that coordinates all aspect of the project. When properly performed ensure that all processes in a project run smoothly. As presented on Table 4.2 the respondent agree that even if there is a project management plan confirm that there is no a project charter, does not lead, managed, controlled and monitored based on the project management plan, all changes are not reviewed, approved and managed properly, and the project closed not properly.

4.3.Project Scope Management

Table 4.3: Parentage frequency distribution for question no 2.7 – 2.10.

Project Scope Management (PSM)		Frequency	Percent
Q2.7 The project scope defined	Strongly Agree	1	7.1
	Agree	3	21.4
	Neither	7	50.0
	Disagree	3	21.4
	Total	14	100.0
Q2.8 The stockholder needs and requirements defined and documented	Agree	2	14.3
	Neither	8	57.1
	Disagree	4	28.6
	Total	14	100.0
Q2.9 There is a detail description about the project	Strongly Agree	1	7.1
	Agree	7	50.0
	Neither	5	35.7
	Disagree	1	7.1
	Total	14	100.0
Q2.10 The project have a WBS	Strongly Agree	1	7.1
	Agree	5	35.7
	Neither	6	42.9
	Disagree	2	14.3
	Total	14	100.0

Source: own survey (2018)

By referring the result obtained from the survey as seen in Table 4.3 half of the respondent 7(50%) neither agree nor disagree with the question project scope defined or not, 8 (57.1%) of the respondents are neutral and 4(28.6%) of them are disagree to judge that stockholder needs and requirements defined and documented, 8 (57.1%) of the respondent believe that there is a detail description about the project.

After all, Project scope management, or rather lack of it, is one of the biggest reason for project failure. Correctly define what is and is not included in the project is absolutely foundational to good project management. As we have shown on the scope management questions responses

even if there is a detail description about the project there is a limitation on stakeholder needs and requirement definitions.

4.4.Project Time Management

Table 4.4: Parentage frequency distribution for question no 2.11 – 2.16.

Project Time Management (PTM)		Frequency	Percent
Q2.11 The project have a policy, procedure and documentation for planning, developing, exciting and controlling the project schedule	Agree	4	28.6
	Neither	5	35.7
	Disagree	5	35.7
	Total	14	100.0
Q2.12 The project have a defined activities	Strongly Agree	1	7.1
	Agree	5	35.7
	Neither	4	28.6
	Disagree	3	21.4
	Strongly Disagree	1	7.1
	Total	14	100.0
Q2.13 All activities defined sequentially	Strongly Agree	1	7.1
	Agree	5	35.7
	Neither	5	35.7
	Disagree	2	14.3
	Strongly Disagree	1	7.1
	Total	14	100.0
Q2.14 The resource needed for each activity defined	Agree	9	64.3
	Neither	3	21.4
	Disagree	2	14.3
	Total	14	100.0
Q2.15 The project schedule developed	Strongly Agree	1	7.1
	Agree	8	57.1

	Neither	4	28.6
	Strongly Disagree	1	7.1
	Total	14	100.0
Q2.16 The project have controlled and monitored based on the project schedule	Strongly Agree	1	7.1
	Agree	3	21.4
	Neither	7	50.0
	Disagree	3	21.4
	Total	14	100.0

Source: own survey (2018)

As per Table 4.4 shows that 10 (70.14%) of the respondent are neutral and disagree on that the project have a policy, procedure and documentation for planning, developing, exciting and controlling the project schedule, 6(42.9%) of then agree the project have a defined activities, 6(42.8%) of then agree that all activity defined sequentially, 9(64.3%) of them agree the project resource defined well, 9(64.4) of the respondent believes project schedule developed and finally half of the are not sure if the project controlled based on the schedule or not and 3(21.4%) agree on that.

Lastly, Time management is essentially the ability to organize and plan the time spent on project activities. The result of good time management is increased effectiveness and productivity. It is the key aspect of project management and involves skills that the researcher tries to solicit through the above questions.

4.5.Project Cost Management

Table 4.5: Parentage frequency distribution for question no 2.17 – 2.19.

Project Cost Management (PCM)		Frequency	Percent
Q2.17 The project have an estimated cost	Strongly Agree	3	21.4
	Agree	6	42.9
	Neither	3	21.4
	Disagree	1	7.1
	Strongly Disagree	1	7.1

	Total	14	100.0
Q2.18 The project have a detailed budget plan	Agree	7	50.0
	Neither	5	35.7
	Disagree	1	7.1
	Strongly Disagree	1	7.1
	Total	14	100.0
Q2.19 The project cost have controlled and monitored	Agree	5	35.7
	Neither	7	50.0
	Disagree	2	14.3
	Total	14	100.0

Source: own survey (2018)

From Table 4.5 the survey result showed that 9 (64.3%) of the respondents agree the project have an estimated cost, 7 (50%) believes that the project have detailed budget plan and 5(35.7%) believes that the project cost have controlled and monitored and helve of them 7(50%) not sure about that.

Essentially, the importance of cost control in project management success is something that every project managers is familiar with. As we have observed from the result the project have an estimated cost and a detailed budget plan even if there is some limitation on the controlling and monitoring activities.

4.6.Project Quality Management

Table 4.6: Parentage frequency distribution for question no 2.20 – 2.22.

Project Quality Management (PQM)		Frequency	Percent
Q2. 20 The project have a quality management plan	Agree	3	21.4
	Neither	6	42.9
	Disagree	3	21.4
	Strongly Disagree	2	14.3
	Total	14	100.0
Q2.21 The project auditing have conducted based on the quality requirements	Agree	1	7.1
	Neither	10	71.4

	Disagree	2	14.3
	Strongly Disagree	1	7.1
	Total	14	100.0
Q2.22 There is a monitoring and recording of results of quality control	Neither	8	57.1
	Disagree	5	35.7
	Strongly Disagree	1	7.1
	Total	14	100.0

Source: own survey (2018)

Based on the data described in Table 4.6 the survey result shows that 6(42.9%) of the respondents are neutral to agree or disagree about the existence of quality management plan and 5(35.9%) of them disagree that there is a quality management plan. On the other hand 10 (71.4%) of them also neutral on that the project auditing have conducted based on the quality requirements, 3(21.4%) disagree on that and only one respondent agree on that.

When you come to monitoring and recording of results of quality control 8(57.1%) are neutral and 6(42.8%) disagree on it.

Projects are almost always emotional endeavors for more than just a few stakeholders. To take that emotion out of decision making and to communicate more effectively with top management, it is essential to incorporate quality process into every project. To this end as a summary the project have not a quality management plan and not audited and controlled based on that.

4.7.Project Human Resource Management

Table 4.7: Parentage frequency distribution for question no 2.23 – 2.25.

Project Human Resource Management (PHRM)		Frequency	Percent
Q2.23 The project identify and document project roles, responsibilities, required skills, reporting relationships, and create a staffing management plan	Strongly Agree	1	7.1
	Neither	5	35.7
	Disagree	7	50.0
	Strongly Disagree	1	7.1
	Total	14	100.0
Q2. 24 The project acquire a full project team	Neither	5	35.7
	Disagree	6	42.9
	Strongly Disagree	3	21.4

	Total	14	100.0
Q2.25 There is a good project team interaction, performance, managing changes to optimize project performance	Neither	5	35.7
	Disagree	7	50.0
	Strongly Disagree	2	14.3
	Total	14	100.0

Source: own survey (2018)

By referring the result obtained from the survey as seen in Table 4.7 half of the respondent 7(50%) disagree with the question the project identify and document project roles, responsibilities, required skills, reporting relationships, and create a staffing management plan and 5(35.7%) of them neutral. 9(64.3%) of the respondent disagree and strongly disagree about the project acquire full project team. On the other hand 9(64.3 %) of the respondent disagree and strongly disagree about the question there is a good project team interaction, performance, managing changes to optimize project performance.

Human resource management is a key and strategic importance to the project success. The most important resource to a project is its people – the project team. Project requires specific expertise for the specific moment in the schedule, depending on the deliverables we expected. When you see our research based on the survey the project not identified and document project roles, responsibilities, required skills, reporting relationships, create a staffing management plan, acquire a full project team this leads this leads to poor project team interaction, performance, managing changes to optimize project performances.

4.8.Project Communication Management

Table 4.8: Parentage frequency distribution for question no 2.26 – 2.28.

Project Communication Management (PCOMM)		Frequency	Percent
Q2.26 The project have a communication management plan based on the stakeholder information needs and requirements	Agree	1	7.1
	Neither	4	28.6
	Disagree	3	21.4
	Strongly Disagree	6	42.9
	Total	14	100.0

Q2.27 The project have a system to create, distribute, store and retrieve project information to the stakeholders	Agree	1	7.1
	Neither	4	28.6
	Disagree	6	42.9
	Strongly Disagree	3	21.4
	Total	14	100.0
Q2.28 The project have a control mechanism for communication	Neither	6	42.9
	Disagree	8	57.1
	Total	14	100.0

Source: own survey (2018)

As per Table 4.8, 9(64.3%) of the respondent are disagree on that the project have a communication management plan based on the stakeholder information needs and requirements 4(28.8%) of the neutral and only one respondent agree. 9 (64.3%) of the respondent disagree on the project have a system to create, distribute, store and retrieve project information to the stakeholders and 4(28.8%) of the neutral and only one respondent agree. About the question the project have a control mechanism for communication 8(57.1%) of them disagree and the rest neutral.

According to Project Management Institute (PMI), communication is an essential tool in the field of project management. The success of the project largely depends on the efficiency of its communication networks it starts from working from day one of the venture and continue for the entire life span of the project. It provides regular updates to notify the status of the project as well as its performance. As we have observed from the survey result most of the respondent disagree about project have a communication management plan based on the stakeholder information needs and requirements, the project have a system to create, distribute, store and retrieve project information to the stakeholders and control mechanism for communication.

4.9.Project Risk Management

Table 4.9: Parentage frequency distribution for question no 2.29 – 2.32.

Project Risk Management (PRM)		Frequency	Percent
Q2.29 The project have a risk management plan	Neither	4	28.6
	Disagree	6	42.9

	Strongly Disagree	4	28.6
	Total	14	100.0
Q2.30 The project risk have identified and analyzed as qualitatively and quantitatively	Disagree	12	85.7
	Strongly Disagree	2	14.3
	Total	14	100.0
Q2.31 The project have risk response plan	Neither	2	14.3
	Disagree	10	71.4
	Strongly Disagree	2	14.3
	Total	14	100.0
Q2.32 The project have a Risk control and monitor system	Neither	3	21.4
	Disagree	8	57.1
	Strongly Disagree	3	21.4
	Total	14	100.0

Source: own survey (2018)

Based on the data summarized on Table 4.9 10(71.5%) of the respondent disagree on the existence of risk management plan and the rest 4(28.6%) neutral to answer this question. 14 (100%) of the respondents disagree about the project risk have identified and analyzed as qualitatively and quantitatively, in the same ways 12(85.7%) and 11(79.5%) disagree on the project have risk response plan and the project have a Risk control and monitor system respectively.

According to (A Guide to the Project Management Body of Knowledge (PMBOK Guide), 2013), project risk management is perhaps the least understood and most effective tool project managers can employee to increase the odd of project success. To this end based on the survey the project not have a risk management plan are not analyzed and doesn't have any risk control and monitoring system.

4.10. Project Procurement Management

Table 4.10: Parentage frequency distribution for question no 2.33 – 2.35.

Project Procurement Management (PPM)		Frequency	Percent
Q2.33 The project have a detailed procurement plan	Strongly Agree	1	7.1
	Agree	4	28.6
	Neither	3	21.4
	Disagree	5	35.7
	Strongly Disagree	1	7.1
	Total	14	100.0
Q2.34 The project procurement process conducted based on the planed procedure	Agree	5	35.7
	Neither	7	50.0
	Disagree	2	14.3
Q2.35 All procurement process closed properly	Agree	3	21.4
	Neither	8	57.1
	Disagree	3	21.4
	Total	14	100.0

Source: own survey (2018)

As we have shown on Table 4.10 shows that 6 (42.8%) of the respondent disagree that the project have detail procurement plan, 5(25.7%) agree about the existence and the rest 4(28.6) are neutral.

About the project procurement process conducted based on the planed procedure 5(35.7%) agree and helve of them neutral and 2(14.3%) disagree. Out of 14 respondents 8(57.1%) are neither agree nor disagree about the procurement process are closed properly.

Project procurement management is part of the project management process in which products and services are acquired or purchased from outside the existing employee base in order to complete the project. Likewise even if they have not a detail procurement plan the procurement management is not bad based on the survey result.

4.11. Project Stakeholder Management

Table 4.11: Parentage frequency distribution for question no 2.36 – 2.39.

Project Stakeholder Management (PSTM)		Frequency	Percent
Q2.36 The project identified all stakeholders that could impact or be impacted by a decision, activity or outcome of the project	Strongly Agree	1	7.1
	Neither	4	28.6
	Disagree	3	21.4
	Strongly Disagree	6	42.9
	Total	14	100.0
Q2.37 The project developed appropriate management strategy to effectively engage stakeholders throughout the project life time	Agree	1	7.1
	Disagree	10	71.4
	Strongly Disagree	3	21.4
	Total	14	100.0
Q2.38 The project have communicated and worked with stakeholders	Agree	2	14.3
	Neither	6	42.9
	Disagree	6	42.9
	Total	14	100.0
Q2.39 There is a control mechanism to monitor overall project stakeholder relationship and engagement	Neither	5	35.7
	Disagree	7	50.0
	Strongly Disagree	2	14.3
	Total	14	100.0

Source: own survey (2018)

By referring the result obtained from the survey as seen in Table 4.11, 9(64.3%) of the respondent disagree, 4(28.8%) neutral and only one respondent agree with the question the project identified all stakeholders that could impact or be impacted by a decision, activity or outcome of the project.

13(91.8%) of the respondent disagree on the project developed appropriate management strategy to effectively engage stakeholders throughout the project life time, 6 (42.9%) of them disagree on the project have communicated and worked with stakeholders and 9(64.3%) of the respondent disagree about there is a control mechanism to monitor overall project stakeholder relationship and engagement.

Overall, project stakeholder management is an important aspect of any project. Most projects have multiple stakeholders and each one have a potential of ability to speed up, slow down, and completely obstruct your progress. Good stakeholder management will not only clear the path of potential obstacles, will actively support swift progress and ultimate on the quality of the result. To this regard the survey indicated that there is no a strong stakeholder management exercise on the cycling project of AACRTB.

4.12. Project Management Success Factors

Table 4.12: Parentage frequency distribution for question no 3.1 – 3.5.

Project Management Success Factors (PMSF)		Frequency	Percent
Q3.1 Relevance *(The project identify real problems and needs of the correct beneficiaries: the project initial design addresses the identified problems and needs)*	Strongly Agree	1	7.1
	Agree	5	35.7
	Neither	3	21.4
	Disagree	5	35.7
	Total	14	100.0
Q3.2 Efficiency *(the quality of day to day project management: cost and value for money; quality of monitoring)*	Agree	1	7.1
	Neither	7	50.0
	Disagree	6	42.9
	Total	14	100.0
Q3.3 Effectiveness *(The planned benefits have been delivered and received by the key beneficiaries)*	Agree	2	14.3
	Neither	3	21.4
	Disagree	5	35.7
	Strongly Disagree	4	28.6
	Total	14	100.0
Q3.4 Impact *(The planned overall objective have been achieved)*	Neither	2	14.3
	Disagree	5	35.7
	Strongly Disagree	7	50.0
	Total	14	100.0
Q3.5 Sustainability *(The project continue at proposed level after implementation of the project)*	Neither	3	21.4
	Disagree	3	21.4
	Strongly Disagree	8	57.1
	Total	14	100.0

Source: own survey (2018).

From Table 4.12 the survey result showed that about the project management success factors that 6 (42.8%) of the respondents agree, 5(35.7%) disagree and 3(21.4%) are neutral about that the project have identify real problems and needs of the correct beneficiaries: the project initial design addresses the identified problems and needs.

Out of 14 respondents 6(42.9%) disagree, half 7(50%) neutral and only one respondent agree with the question related to the efficiency (i.e. the quality of day to day project management: cost and value for money; quality of monitoring is good).

To check the Effectiveness whether the planned benefits have been delivered and received by the key beneficiaries 9(44.3%) of the respondent disagree, 3(21.4%) neutral and 2(14.3%) agreed.

On the other hand to check whether the planned overall objective have been achieved or not 12(85.7%) of the respondent disagree and 2(14.3%) of them neutral.

The last but not the least to check the sustainability of the project through the question whether the project continue at proposed level after implementation of the project 11(78.5%) of the respondent disagree and 3(21.4%) of them neutral.

4.13. Description of respondents' project knowledge area

For the purpose of describing participants' project knowledge area minimum scores, maximum scores, mean and standard deviations were computed. The summaries of the computations are presented in Table 4.13 below.

Table 4.13: Descriptive statistics of the project knowledge area scale

Variables	N	Minimum	Maximum	Mean	Std. Deviation
PIM	14	1.50	4.67	3.2500	.85423
PSM	14	1.75	4.00	2.7679	.52316
PTM	14	1.33	4.17	2.7500	.68796
PCM	14	1.67	4.67	2.6190	.80444
PQM	14	2.33	4.67	3.3333	.62703
PHRM	14	3.00	4.67	3.7143	.55249
PCOMM	14	2.67	4.67	3.7857	.73505
PRM	14	3.25	5.00	4.0357	.51755
PPM	14	2.00	3.67	2.9524	.65185
PSTM	14	2.00	4.75	3.6786	.73005

Source: own survey (2018).

As can be seen from Table 4.12 respondents have higher mean scores in Project Integration Management (M= 3.250, SD= .85423), Project Quality Management (M= 3.33333, SD= .62703), Project Human Resource Management (M= 3.7143, SD= .55249), Project Communication Management (M= 3.7857, SD= .73505), Project Risk Management (M= 4.0357, SD= .51755), Project Stakeholder Management (M= 3.6786, SD= .73005).

On the other hand the table also informs us that respondents have lower mean scores in Project Scope Management (M= 2.7679, SD= .52316), Project Time Management (M= 2.75, SD= .68796), Project Cost Management (M= 2.6190, SD= .80444), Project Procurement Management (M= 2.9524, SD= .65185).

Taking the hypothetical average score (3 in a scale of five) in to consideration the above data implied that respondents have disagree in Project Integration Management, Project Quality Management, Project Human Resource Management, Project Communication Management, Project Risk Management and Project Stakeholder Management.

The findings also implied that participants of the study have Agree on Project Scope Management, Project Time Management, Project Cost Management and Project Procurement Management.

4.14. Description of respondents' project success factors

Table 4.14: Mean scores of project success scale

Variables	N	Minimum	Maximum	Mean	Std. Deviation
Relevance	14	1	4	2.86	1.027
Efficiency	14	2	4	3.36	.633
Effectiveness	14	2	5	3.79	1.051
Impact	14	3	5	4.36	.745
Sustainability	14	3	5	4.36	.842

Source: own survey (2018).

As can be seen from Table 4.14 respondents have higher mean scores in Project Success variable Efficiency (M= 3.36, SD= .633), Effectiveness (M= 3.79, SD= 1.051) and Impact (M= 4.36, SD=

.842). Correspondingly the table also informs us that respondents have lower mean scores in Relevance (M= 2.86, SD= 1.027).

The findings also implied that participants of the study have disagreed on all success variables except relevance.

4.15. Relative Importance Index (RII) Analysis

The analysis ware aided by the use of Statistical Package for Social Science (SPSS) where the score assigned to each ten project management knowledge area factors and project success factors from 14 questionnaires was subject to statistical analysis for farther insight. The contribution of each of the factors to the overall project success was examined and ranking of the attributes ware done by use of Relative Importance Index (RII) which was computed using equation (1) and the results of the analysis are presented in Table 4.15 and Table 4.16.

$$RII = \frac{\sum W}{A*N} (0 \leq RII \leq 1) \qquad (1)$$

***Where** : **W** = is the weight given to each factor by the respondents and ranges from 1 – 5, (where "1" is "strongly Agree" and "5" "strongly Disagree")*

***A**= is the highest weght (i.e. 5 in this case) and;*

***N**= is the total number of respondents.*

Table 4.15: RII project Knowledge area.

Variables	N	Mean	∑W	A*N	RII	Rank
PIM	14	3.25	45.50	70	0.65	6
PSM	14	2.77	38.75	70	0.55	8
PTM	14	2.75	38.50	70	0.55	8
PCM	14	2.62	36.67	70	0.52	10
PQM	14	3.33	46.67	70	0.67	5
PHRM	14	3.71	52.00	70	0.74	3
PCOMM	14	3.79	53.00	70	0.76	2
PRM	14	4.04	56.50	70	0.81	1
PPM	14	2.95	41.33	70	0.59	7
PSTM	14	3.68	51.50	70	0.74	4

Source: own survey (2018).

From the summary of results in Table 4.15, it can be observed that respondents have higher RII in Project Integration Management (RII= .65), Project Quality Management (RII= .67), Project Human Resource Management (RII= .74), Project Communication (RII= .76), Project Risk Management (RII= .81), Project Stakeholder Management (RII= .74).

Consequently, the research hitherto established that there is good management in Project Scope Management, Project Time Management, Project Cost Management, and Project Procurement Management.

Table 4.1: RII project success.

Variables	N	Mean	∑W	A*N	RII	Rank
Relevance	14	2.86	40	70	0.6	5
Efficiency	14	3.36	47	70	0.7	4
Effectiveness	14	3.79	53.1	70	0.8	3
Impact	14	4.36	61	70	0.9	1
Sustainability	14	4.36	61	70	0.9	1

Source: own survey (2018).

The study also sought to establish that Impact and sustainability have high aggregated relative importance index of 0.9. To the same way the findings also implied that participants of the study have disagreed on all success variables except relevance.

CHAPTER FIVE: SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1. Summary of Findings

The study investigates the project management processes engaged in by the AACRTB Cycling project in execution of the project. In line with this general objective, the study investigated four specific objectives. These were: to examine whether the AACRTB cycling project adopt slandered Project Management practices in the implementation of the project; to investigate the processes used in the implementation of the AACRTB cycling project and to determine the causes of project failure in AACRTB cycling project..

The results obtained in the study supported the research objectives examined. Below are summary of the major findings in line with the research objectives.

The first objective of the study which sought to examine whether the AACRTB cycling project adopt Project Management Institute - A Guide to Project Management Body Of knowledge (PMI, 2013) exercise in the implementation of the project was achieved. The study found that, taking the hypothetical average score (3 in a scale of five) in to consideration the data analysis implied that respondents agree that AACRTB exercise ten project management knowledge area but have a limitation on Project Human Resource management (PHRM), Project Communication Management (PCOMM), Project Risk Management (PRM) and Project Stakeholder Management (PSTM). The findings also implied that the adoption of Project Integration Management (PIM), Project Scope Management (PSM), Project Time Management (PTM), Project Cost Management (PCM), Project Quality Management (PQM), and Project Procurement Management (PPM) are averagely not bad.

The second objective to investigate the processes used in the implementation of the AACRTB cycling project. The study also revealed that the project management processes of initiation, planning, execution, monitoring and controlling and closing were adopted in the implementation of projects in the Bureau. It was also revealed that the various activities in each of the five phases were adhered to by the Bureau.

The third and final objective which sought to determine the causes of project failure in AACRTB cycling project the study found that a number of factors accounted for failure of the project. In particulate poor project human resource management, project communication management, project risk management and project stakeholder management during the execution of the project were found to account for failure of the project.

5.2. Conclusion

The conclusion gives the summary of what has already been said in the major findings from the study questions and analysis by linking them to the objectives of the research study. According to the finding of the research the following conclusions are drawn.

According to the World Bank report the majority of public sector projects in least developed countries is either in part or total failures (World Bank, 2015). Application of project management methods and body of knowledge has become mandatory. Hence, Ethiopia as a developing country transforming from agricultural lead economy to industrialization economy identifies transportation as one deriving forces to change and development. Institution like AACRTB should understand the importance of effective and timely application of project management body of knowledge in the deployment and implementation of projects. Therefore this research has explored the gap between the theory of project management body of knowledge and its exercise specifically in the cycling project of AACRTB.

Based on the outcome of the study, it can be conclude that standard project management practices and body of knowledge groups are mostly implemented, but some inadequacy were identified by respondents including Project Human Resource management (PHRM), Project Communication Management (PCOMM), Project Risk Management (PRM) and Project Stakeholder Management (PSTM). Likewise project management process were adopted in the implementation, because of unnecessarily adhering of those knowledge area contributing for the failure of the project, there is an association between knowledge areas and project success factors and finally it was highly recommended that five project management processes groups and ten knowledge areas must be carried out effectively to ensure high success rate of projects.

5.3.Recommendations

The following recommendations are proposed as a result of this research. The recommendation is based on the data get from respondents on specifically cycling project of AACRTB.

1. **Improve Project Stakeholder Management**

The importance of effective stakeholder and community engagement in the planning and implementation of projects necessitates an understanding of dealing with host communities and key stakeholders, particularly those who represent a perceived threat to your project.

Not involving communities in project development can have serious long-term negative impacts on a project outcomes. Establishing dialogue and building strong and genuine relationships with all stakeholders is now recognized as a vitally important part of any project. Hence AACRTB has a limitation on it based on the research output and should give proper attention on stakeholders engagement. This will be done through consultation, stakeholder registers, analysis and mapping to detailed engagement and communication plans. This have an advantage of getting free assistance and resources, reduces some risks, increase the perception of success, and easier for project closer, that means eases benefits realisation and the transition phase at the end of a project when deliverables are handed over to the operators. This is very true – it is far easier to hand over deliverables to someone who knows a bit about them than to someone who is hearing about the project for the first time. The more you work with your stakeholders during the project, the more prepared them and their teams will be to receive and operate.

2. **Improve Project Communication Management**

In project management communication plays a vital role, it is one of the comer stones of collaboration and greatly contribute towards the success of the project. As we have observed from the research AACRTB have a limitation on practicing the proper project communication management principles specifically on cycling project based on the respondent response. So this should be improved for the other projects by eeffective communication results in all involved in

the project understanding what is being communicated. This comes from spending time with the project stakeholders, by fully engaged and prepared to listen and understand the feelings which may be the key driver of the communication process.

3. **Improve Project Human Resource management**

Human Resources in Project Management focus on project team recruitment, organization and management until the end of a given project. Its role starts from defining core competencies which are going to be needed, to team building and motivation. Likewise there is a inadequacy on this aspect also within cycling project of AACRTB, so should improve in the future for other projects by means of identifying what human resource will be needed to complete the work on each of the project activities within the project and developing a human resource management plan.

Finally, to ensure effective and successful implementation of projects, Project Management processes must be adopted and adhered to the letter. Specifically the various activities under each of the five processes groups and ten project management knowledge areas must be carried out effectively to ensure high success rate of future projects.

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Annexure I. Questionnaire

St. Mary's University
School of Graduate Studies
Department of Project Management
Master's Program in Project Management

Dear Respondent

I am Behailu Gebreyesus MA student at St. Mary's University in school of graduate studies. I am engaged in research study entitled: **Project management practice and critical failure factors cycling project of Addis Ababa City Road and Transport Bureau**.

First and foremost, I would like to express my heartfelt appreciation in advance for your cooperation completing the questionnaire, sparing some of your precious time.

General Instruction:

Please feel free to write your answers in Amharic, if necessary. Tick (√ or circle) in the appropriate space provided.

The attached questionnaire is to be completed as part of the Project Close procedure by those project teams involved directly or indirectly with cycling project of AACRTB. It should be noted that this is not designed to lay the blame for any shortfalls at any individuals door but is to document the strengths and weaknesses encountered by the project team so that the lessons learnt can be carried forward to other projects and to feed back into the overall continuous improvement process.

Please could you complete this questionnaire and return to E-mail address: behailug2000@gmail.com

These should have been received by him no later than May 30, 2018. Or can be contacted on phone number +251911433124

Confidentiality:

Please be informed that data you furnish will be safeguarded with strict confidentiality and be used for this research purpose only. You need not mention your name.

Yours sincerely

Behailu Gebreyesus

Part I. Demographic Information

1. Address (sub-city) ----------

2. Sex

A. Male

B. Female

3. Age ----------

4. Educational level

A. First Degree

B. Second Degree

C. Above Second Degree

6. How long have you been in AACRTB?

A. < 1 year

B.1-2 years

C. 3-5 years

D. 6-and above

Part II. Project Management practice

The item has five-point Likert type scales; the scales have the following meaning

① Strongly Agree,

② Agree

③ Neither agrees nor disagrees,

④ Disagree

⑤ Strongly Disagree,

Please Tick (√ or circle) in the appropriate space provided.

Code	Project knowledge Area	Strongly Agree ①	Agree ②	Neither ③	Disagree ④	Strongly Disagree ⑤
2.1	Do you agree that the project have project full charter					
2.2	Do you agree that the project have proper project management plan					
2.3	The project was lead and managed based on the project management plan					
2.4	The project have monitored and controlled based on the project management plan					
2.5	All changes are reviewed, approved and managed					
2.6	The project closed properly					
2.7	The project scope defined					
2.8	The stockholder needs and requirements defined and documented					
2.9	There is a detail description about the project					
2.10	The project have a WBS					
2.11	The project have a policy, procedure and documentation for planning, developing, exciting and controlling the project schedule					
2.12	The project have a defined activities					
2.13	All activities defined sequentially					
2.14	The resource needed for each activity defined					
2.15	The project schedule developed					
2.16	The project have controlled and monitored based on the project schedule					
2.17	The project have an estimated cost					
2.18	The project have a detailed budget plan					
2.19	The project cost have controlled and monitored					
2.2	The project have a quality management plan					
2.21	The project auditing have conducted based on the quality requirements					
2.22	There is a monitoring and recording of results of quality control					
2.23	The project identify and document project roles, responsibilities, required skills, reporting relationships, and create a staffing management plan					
2.24	The project acquire a full project team					
2.25	There is a good project team interaction,					

	performance, managing changes to optimize project performance					
2.26	The project have a communication management plan based on the stakeholder information needs and requirements					
2.27	The project have a system to create, distribute, store and retrieve project information to the stakeholders					
2.28	The project have a control mechanism for communication					
2.29	The project have a risk management plan					
2.30	The project risk have identified and analyzed as qualitatively and quantitatively					
2.31	The project have risk response plan					
2.32	The project have a Risk control and monitor system					
2.33	The project have a detailed procurement plan					
2.34	The project procurement process conducted based on the planed procedure					
2.35	All procurement process closed properly					
2.36	The project identified all stakeholders that could impact or be impacted by a decision, activity or outcome of the project					
2.37	The project developed appropriate management strategy to effectively engage stakeholders throughout the project life time					
2.38	The project have communicated and worked with stakeholders					
2.39	There is a control mechanism to monitor overall project stakeholder relationship and engagement					

Part III. Project Success criteria

Please rate the project success criteria below per there level (degree) of performance to the overall success of the cycling project you are directly or indirectly involved. Tick (√ or circle) in the appropriate space provided.

code	List of suggested success criteria	Strongly Agree ①	Agree ②	Neither ③	Disagree ④	Strongly Disagree ⑤
3.1	**Relevance** (The project identify real problems and needs of the correct beneficiaries: the project initial design addresses the identified problems and needs					
3.2	**Efficiency** (the quality of day to day project management: cost and value for money; quality of monitoring)					
3.3	**Effectiveness** (The planned benefits have been delivered and received by the key beneficiaries)					
3.4	**Impact** (The planned overall objective have been achieved)					
3.5	**Sustainability** (The project continue at proposed level after implementation of the project)					

Annexure II. Existing situation

Figure 1.2: Newly purchased cycles.

Figure1.3: Vehicles parking on the dedicated cycling lane

Figure 1.4: Street venders on the dedicated cycling lane.

Figure 1.5. Damaging cycling infrastructures.

Source: Phots taken by own (2018).