ADDIS ABABA UNIVERSITY COLLEGE OF BUSINESS AND ECONOMICS SCHOOL OF COMMERCE

Assessing Project Monitoring and Evaluation Practice at Ethio-Telecom: The Case of Cloud Computing Service Project

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By:

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Project Work Submitted to Addis Ababa University College of Business and Economics School of Commerce in Partial Fulfillment of the Requirement for the Degree of Master of Arts in Project Management

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DECLARATION

I, Merhawit Habtu, declare that this final project entitled “Assessing Project Monitoring and Evaluation Practice at Ethio-Telecom: The Case of Cloud Computing Service Project” is my original work, prepared under the guidance of the research advisor. All sources of resources utilized in the thesis have been properly credited. I further affirm that the thesis has not been submitted in part or in full to any other higher learning institution for the intention of receiving a degree.

_____ _____

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Signature and Date

LETTER OF CERTIFICATION

This is to certify that Merhawit Habtu has carried out this project work on the topic entitled "Assessing Project Monitoring and Evaluation Practice at Ethio-Telecom: The Case of Cloud Computing Service Project" under my supervision and guidance. This work is original in nature and, in my opinion, suitable for submission in partial fulfillment of the requirement for the award of Master of Arts Degree in Project Management.

Advisor- Dr. Mengistu Bogale

Signature: _____ Date: _____

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ABSTRACT

Assessment of the monitoring and evaluation techniques used to obtain relevant details from completed and continuing projects to develop projects for the future. The study's primary goal was to assess the project's overall goal of launching cloud computing in ethio telecom and assess how well it was accomplished using project M&E metrics. The assessment was basically focused on evaluating the core business case for launching cloud computing, the project planning emphasizing M&E, the fundamentals of project M&E, and which factors were significantly affecting the effectiveness of project M&E practices at ethio telecom. It also evaluates readiness preparation, particularly the level of team training that was certain to affect monitoring and evaluation and what the overall M&E culture of the organization looked like. The researcher evaluated the above-mentioned aims through a literature review and survey. A Google Form was used to distribute the survey to 45 employees who have direct contact with the cloud computing project. For the literature study, research papers from the Addis Abeba University website and the business world were picked. The study found that the cloud computing project placed a strong emphasis on its M&E activities, received technical training, and had a formal M&E plan. The three main elements of a cloud computing project are time, scope, and budget, and the company used lessons learned from earlier projects to implement an ERP system. This study recommends that ethio telecom implement a formal M&E system and make it accessible to all employees. It should establish standard M&E frameworks based on international best practices, employ technology-based M&E tools, integrate M&E processes into project implementation, establish the organization's goals, objectives, and key performance indicators, conduct a needs analysis, create M&E plans, provide training and support, include participants in the M&E process, use technology for data gathering, processing, visualization, and reporting, and set up a monitoring and evaluation plan, guide, and structure at the organizational level.

Keywords: *Monitoring and Evaluation, Evaluation, Monitoring and Evaluation Plan, Technical Expertise*

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ABBREVATIONS AND ACRONYMS

ERP- Enterprise resource planning

IT- Information Technology

ICT -Information and communication technologies

NIST-The National Institute of Standards and Technology

UNDP- United Nations Development Programme

UNAIDS-United Nations Programme on HIV/AIDS

CHAPTER ONE

INTRODUCTION

1.1. Background of the Study

Monitoring and evaluation are two different concepts, although they are closely linked and balanced to facilitate decision-making. While. Monitoring is used, and it is a non-stop gathering of data on specified indicators to know whether an intervention (project, program, or policy) is being implemented based on the design, activity schedules, and budget [Shapiro, 2004]. Evaluation is used to review the design, impact, and implementation in terms of distribution, effectiveness, efficiency, and sustainability of outcomes and impacts based on the periodically and systematically gathered data [McCoy, Ngari, & Krumpe, 2005]. To this effect, project M&E is considered an important part of the project life cycle, and good management practice includes monitoring and evaluation [Olive, 2002]. M&E is also able to develop rational management of the output and outcomes as it promotes while inspiring the allocation of effort and resources in the direction where it will have the greatest impact [Ermias, 2007]. Besides, effective project monitoring and evaluation is one of the issues that regulate the success or failure of development projects [Ika, L.A. et al., 2011].

Accordingly, most authors agreed that monitoring and evaluation play a big role in project management. Because the output of the M&E is crucial input for rational decision-making by all stakeholders engaged in the project, including sponsors, personnel, and beneficiaries, having up-to-date and accurate information on the consequences of different project involvements is essential for steering the project in the right direction for those who lead and sponsor the project. On top of this, the beneficiaries will accept the decision without resistance as it may convincingly maximize their expected benefit or minimize any adverse effects [McCoy, Ngari, & Krumpe, 2005; Ika, L.A. et al., 2011; Olive, 2002].

Thus, the monitoring and evaluation approach is advantageous and useful for growth operators. To this end, one approach is to design and build an M&E system, which is a crucial part of project management for ensuring project success. M&E establishes and keeps track of the outcomes that organizations, including governments, have accomplished (or do not accomplish)

in their intended objectives or accomplishments. Moreover, M&E has a lot to contribute to organizational learning or lessons learned as it documents and makes available current monitoring results as well as evaluations of past project impacts and performances for future reference. According to UNDP (2009), monitoring and evaluation help an organization extract appropriate material from past and ongoing actions that can be used as the basis for programmatic fine-tuning, reorientation, and future planning. Without effective planning, monitoring, and evaluation, it would be difficult to judge if work is going in the correct direction, whether growth and achievement can be claimed, and how future efforts might be amended [UNDP, 2009].

Thus, how organizations undertake this crucial task in their project execution is worth attracting attention. To this end, examining the M&E practices of Ethiopian business organizations in their project execution endeavors by taking Ethiopia Telecom, specifically its launch of cloud computing, as a case study is the purpose of this paper. In doing so, the paper begins by providing background on cloud computing with due emphasis on the problems that initiated it. It is a widely known fact that every telecom company's customer complains about terrible connection experiences. Had it not been for the lack of options in the telecom industry, significant customers would have switched their providers every now and then. Unfortunately, all the telecom companies are not totally free from this problem, the difference among the companies is only in the degree of its extent and severity. Hence, telecom companies must go beyond network connectivity services and provide unique, long-lasting solutions to their customer base, so as to keep up their market position by retaining committed customers. In this regard, cloud computing in the telecom sector may undoubtedly be helpful, when it comes to moving beyond the customary connection service provision. Historically, it has only been in the last decade or two that cloud computing has become one of the most widely used terms in the telecom industry by companies, developers, and customers [Sagar Sapkota and Khawar Shehzad, 2011]. According to these authors (Sapkota and Shehzad (2011)), cloud computing has been considered a revolutionary concept in IT and telecom, not only for its ability to reshape business models and service offerings, but also for its ability to avail hardware and software on lease, thereby creating a new revenue generating services as well as attaching the customer more to the telecom company [Sagar Sapkota and Khawar Shehzad (2011)]. Hence, launching the cloud computing service by ethio telecom among others, is considered an effort to constantly update itself and follow the trends of global industry change.

In the domestic realm, until Safaricom became online, ethio telecom was the sole company offering telecom services in Ethiopia. Although the entry of this company poses no immediate threat as there is excess demand to share and the company hasn't had its own backbone infrastructure, ethio telecom needs to evolve beyond network connectivity and provide distinctive service offerings beyond its core portfolio. Here comes, the need to take the lead in introducing cloud technology in the Ethiopian telecom industry. Accordingly, ethio telecom launched the cloud computing project on October 27, 2022. This project's implementation is certain to provide ethio telecom a competitive edge and reduce the threat of client loss to some extent. However, this expectation should be substantiated with tangible evidence based on an assessment of the project. To this end, and for the reasons discussed above, the M&E approach is of great importance. Clearly, as cloud computing has been expected to help in reaching the business goal, competent project management, which includes M&E, has surely played an important role in its achievement. Without a clear path to follow, it would be exceedingly difficult to manage projects in a way that allows them to reach their desired goals.

This study aims to identify the variables that affect monitoring and evaluation in the telecom sector, with a particular emphasis on the launch of cloud computing projects at ethio telecom.

1.2. Background of the Company

Ethio Telecom, previously known as Ethiopian Telecommunications Corporation (ETC) was established by proclamation No. 49/1996 on October 1, 1996, to provide telecommunications services (Worku Bogale, 2005). Following technological and other changes, the company has widened its objective of establishment and encompassed a number of initiatives over time.

Accordingly, the recent main goal of ethio telecom is to provide services beyond connectivity, enable inclusive growth by providing digital and financial services, and simplify the daily activities of organizations and individuals. Engaging in new business streams and shifting revenue sources from traditional to value-added services, offering local and international products and services to the market. As part of its many new initiatives in this regard, ethio telecom has introduced a new business-empowering cloud computing system called Tele Cloud. According to Frehiwet Tamiru, CEO of ethio telecom, Tele Cloud is a brand-new digital service that enables organizations and businesses looking for a reliable off-site data backup solution as well as individuals needing to store, compile, and access their data to do so in secure data centres built by digital solution providers without having to construct their own data centre and

related infrastructure. Adoption of cloud computing can reshape an organization's IT landscape and heavily impact its business strategy and performance.

1.3. Statement of the Problem

Monitoring and evaluation (M&E) are essential components of results-based management (Rist, Boily, & Martin, 2011). Most project managers acknowledge that monitoring and evaluation of projects are important for effective project management, Kahilu (2010). Wachaiyu (2016) revealed that there is a positive and significant relationship between the strength of the monitoring and evaluation team and project success. It is a frequently expressed concern that the information provided by monitoring and evaluation neither influences decision-making during project implementation nor the planning of ongoing project development or new initiatives (Mulandi, 2013). According to studies, approximately 90% of projects in the telecommunications sector lack a thorough monitoring strategy and, as a result, fail to meet their pre-established goals. Most of these initiatives are formed with optimism and many plans throughout the conception stages. However, if there is a detailed strategy in place to conduct monitoring and evaluation of these initiatives, difficulties that arise during implementation can be mitigated.

The success of the projects is heavily influenced by monitoring and evaluation, which will provide the business with a substantial competitive edge in the eyes of investors. M&E increases management of the output and outcomes while inspiring the provision of effort and resources in the track where it will have the greatest effect (Ermias H., 2007). Actual project monitoring and evaluation is one of the factors that determines the achievement or failure of development projects (Ika, L.A. et al., 2011). Bekalu, (2020), finds out that ethio telecom has its own limitations in completing previous expansion projects within the planned budget (agreed upon cost), within the planned scope, and with the specified quality. According to Bekalu, the project M&E practice of the company is not as effective as expected, regardless of its significant contribution to enhancing the success of expansion projects. In line with this, the M&E practices for expansion projects in the ethio telecom are not as effective as expected in contributing to meeting the major project constraints in the company. The other study by Yemisrach Ayenew, (2021) revealed that some of the most significant gaps seen in the company's project M&E practice were the lack of appropriate organizational structures that were best suited to M&E activities, the absence of lesson learned documents that would have improved project implementation in the future, the absence of a separate plan for M&E

activities, the absence of evaluation standards and principles, and the absence of outcomes evaluation. Lack of stakeholder participation in M&E operations and shoddy project completion follow-up. The study is essential to the company since it will shed light on how M&E is used inside the organization. The M&E system's advantages and disadvantages will be identified, and subsequent remedial steps will be taken to enhance this system. Even though the company uses M&E to manage its projects, nothing is known about how it affects achieving project objectives.

The empirical gap that can be noticed from the aforementioned cases is explained by the fact that the majority of research was conducted prior to a new rival entering the market. The ability of the company to continue operating is not studied for initiatives like cloud computing and tele birr. It's difficult to locate studies on the concept of cloud computing, which can be considered a conceptual gap in the field, as it is a new technology for IT technologies.

Thus, this study aims at identifying the variables that affect monitoring and evaluation in telecom sector projects, with a particular emphasis on the launch of cloud computing projects at ethio telecom. In doing so, the study will actually look at the culture and practices of monitoring and evaluation, with specific emphasis on the training level of the monitoring and evaluation team, the effectiveness of monitoring and evaluation in the telecommunications industry, and the relationship between M&E effectiveness and the success of the enterprise's projects.

1.4 Definition of key terms

Monitoring: Monitoring is defined as “a continuing function that aims primarily to provide the management and main stakeholders of an ongoing intervention with early indications of progress, or lack thereof, in the achievement of results” (OECD, 2010, pp. 27-28).

Evaluation: Evaluation is defined as “the systematic and objective assessment of an on-going or completed operation, program or policy, its design, implementation and results. The aim of the evaluation process is to determine the relevance and fulfilment of objectives, including the efficiency, effectiveness, impact and sustainability, and it should provide information that is reliable and useful to enable the incorporation of lessons into management decision-making” (IFRC, 2011, p.13).

Cloud computing: Cloud computing is defined as “a new information technology (IT) paradigm that promises to revolutionize traditional IT delivery through reduced costs, greater

elasticity, and ubiquitous access. Cloud technologies also offer new pricing and deployment strategies that are unavailable in traditional enterprise solutions" (Hsu, Ray, & Li-Hsieh, 2014).

1.5. Research Questions

The following research questions are formulated to be answered in the course of the research:

- Asses and review the project's plan emphasizing on its goal setting and M&E plan.
- Asses the readiness process respecting M&E, including training and resource allocation and utilization.
- Examine the primary aspects among the identified elements that affect the project M&E efficiency of the ethio telecom cloud computing project after identifying and evaluating the basic components of the project M&E plan.
- Assess and evaluate the organization culture respecting M&E based on this project experience.

1.5. Objective of the Study

1.5.1. General objective

The study's main goal was to identify the overall project objective of Launching Cloud Computing project in Ethio telecom and evaluate its attainment based on the project M&E point of views. To this end the study will emphasizes on the following specific objects that tends to answer the basic questions of the study.

1.5.2. Specific objective

In line with the study's overall issues to address and the general objective, the specific objectives of the study will include:

- What did the project planning, emphasizing on M&E looks like?
- How was the readiness preparation particularly the level of training of the team that were certain to influence Monitoring and Evaluation? How the team's level of training impacts monitoring and evaluation?
- What were the basic elements of the project M&E and which were having significant impacts on the efficiency of project M&E practices at ethio telecom?

- How does the M&E-respecting organizational culture seem based on this project's experience?

1.6 Significance of the Study

The study's findings have significance for helping academics working in project management, specifically monitoring and evaluation, comprehend the effects of various M&E techniques on project performance. They will identify areas for development for better project outcomes and determine any current gaps in M&E practice. For better project outcomes, the study is significantly advance understanding of the intricate relationship between M&E practice and project performance. Project managers and project personnel will identify weaknesses in the current monitoring and evaluation system that, if addressed, might increase the success of their projects. By evaluating the M&E practices used in each step of the cloud computing project and identifying the key achievements and obstacles of the project, this research shed light on how the company will be able to manage future and complicated ICT technology projects. The study's findings be of great use to cloud computing projects as they assess the efficiency of their project management monitoring and evaluation procedures to improve project performance. Moreover, monitoring and evaluation procedures will be advised. Future scholars in the subject will gain knowledge from the study, particularly those who are interested in studying the project management, monitoring, and evaluation procedures used in the ethio telecom industry.

1.6. Scope of the Study

The ethio telecom cloud computing project was covered by the study. Employees of the company who participate directly or indirectly in project-related activities including planning, M&E, and technical experts are the study's participants. The management team of Ethio-telecom, which oversees the company's project-related issues, will also participate in the study. In terms of the study's factors, efforts has been made to demonstrate the relationship between effective project M&E and a variety of elements (budget allocation, human resource capacity, stakeholder involvement, and management support), as well as to ascertain how these two ideas interact.

For companies, cloud computing is a brand-new technology or concept that is still in its infancy. As a result, the majority of the organization lacks the confidence to implement it. This study addresses the problem of project M&E procedures for organizations. implement.

1.7. Limitation of the Study

The number of samples that may be gathered is limited since the employees is engaged on a variety of projects while the organization goes through a major transformation. Both for the organization and the client, cloud computing is a new technology. Although many businesses have begun the journey to the cloud, project management techniques have not yet caught up with cloud computing. It's odd that there aren't many materials available regarding managing cloud (transformation) projects because how cloud computing functions has a significant influence on the abilities a project manager requires to successfully complete such initiatives. Recognizing that cloud computing is essentially a new approach to IT and doing business rather than a particular technology, product, or design is one of the first challenges. The technical experts at ethio telecom is currently somewhat small. A semi-structured interview with them has been challenging to conduct.

1.8. Organization of the Study

The study is organized into five chapters, each of which deals with several concepts toward a single goal. Reviews of theoretical and empirical literature were incorporated in Chapter 2 as research support. The research type, study population, sampling strategy, sample size, data collection tool, and technique of data analysis were all briefly discussed in chapter three's section on research design and methodology. A quick analysis and interpretation of the findings were supported by theoretical or empirical literature in Chapter 4. The overall conclusion of the article, the potential recommendations, and the conclusion were all included in Chapter 5.

CHAPTER TWO

LITERATURE REVIEW

2.1. Theoretical Review

2.1.1. Project Monitoring

Project monitoring is the ongoing evaluation of how successfully project objectives are being accomplished and project tasks are being performed. With the aim of informing management and stakeholders of progress—or lack thereof—in attaining project outcomes, project monitoring is a continuous activity. Monitoring of inputs and outputs is monitoring and evaluation (M&E) at its most fundamental level, where inputs are tracked, according to Edmunds & Marchant (2008). These resources are documented or acknowledged as inputs and include people, material, and financial resources, as well as the process through which they are transformed into project goods and services. When the project is being implemented, it enables corrective action. Monitoring programs should be an essential component of daily management since they put a strong emphasis on inputs and short-term results (Jeremiah & Kabeyi, 2019). According to Jeremiah & Kabeyi (2019), monitoring is an integral part of evaluation, focusing on the quantity and quality of executed activities, processes used in the project and external processes such as impact triggered by implemented activities and environmental factors.

Monitoring is a broad management strategy aimed to see if the project is doing the right thing and are doing it right, in order to improve its quality. Good monitoring is focused on results, records these results in reports, makes recommendations, and follows up with decisions and actions. Its scope includes assessing the progress of projects and also providing managers with information that will be used as a basis for making decisions and taking action (Ritz & Levy, 2013).

Monitoring is a continuing managerial function that aims to provide managers, decision-makers, and main stakeholders with regular feedback and early indications of progress or lack thereof in the achievement of intended results and the attainment of goals and objectives. It involves reporting on actual performance against what was planned or expected according to pre-determined standards. According to Mulwa & Nguluu (2003), monitoring involves observing a project frequently, regularly and collecting project information on a timely basis,

and sharing it with project stakeholders in the project under focus. Key program activities and objectives should be at the heart of the monitoring system. Its focus must be on a limited number of narrowly defined monitoring issues that are directly connected to performance and are often drawn from program goals, objectives, and targets in order to function effectively.

Monitoring goals include informing managers and other stakeholders on a regular basis about results and target-related progress, ensuring that operations are carried out as intended, measuring the degree of goal attainment, identifying implementation issues so that they can be fixed, identifying strong performances and improving weak ones, assisting in concentrating supervision on problem areas, and verifying that the actions being taken are producing the desired results. Participate in the evaluation and revision of program priorities and plans. Any budget demands should be made and justified (Ritz & Levy, 2013).

2.1.1.1 Types of Monitoring

Monitoring is the ongoing evaluation of a program or project in reference to the planned timeline for completion. It is also an effective management tool that, when utilized correctly, ought to offer constant feedback on the project's execution as well as help identify possible obstacles and successes to enable prompt choices.

Monitoring includes a variety of activities in addition to the transformation of inputs into outputs, such as process monitoring, technical monitoring, financial monitoring, and impact monitoring.

Process monitoring involves continuously monitoring a project to ensure it stays on track, achieves its goals, and yields the desired results. focuses on understanding how outputs and results are delivered, tracking resources and inputs, and finding factors that affect how well an activity is completed or production is produced. Since the main purpose of process monitoring is to keep track of the resources and inputs used and to examine how actions and outputs are carried out, it is done early on in a project. The activities, inputs, and outputs are counted during this monitoring. It gives project owners and managers information to help them keep track of whether project activities are going according to schedule.

Technical monitoring is the responsibility of a dedicated specialist who makes sure the project is completed on schedule and with the desired level of quality. Monitoring demonstrates that consultants and contractors uphold the necessary requirements and agreements (Hermann-Friede et al. 2014).

Financial monitoring is the process that measures how well a project is progressing in relation to its budget, timeline, and success indicators. Financial efficiency within a project is mostly measured through financial monitoring. The data assists the project team in formulating plans to optimize outcomes with the fewest possible inputs.

Quality monitoring provides project managers with a record of progress made in relation to agreed-upon KPIs (key performance indicators) and targets. It also assists them in assigning critical success factors (CSFs), agreeing on KPIs (key performance indicators) for those CSFs, agreeing on measurement methodologies, agreeing on effective measurement tasks, continuously evaluating the project, and developing contingency plans or risk mitigation measures.

2.1.2. Project Evaluation

Evaluation is the act of gathering and compiling data, to evaluate the worth, merit, relevance, or quality of a project. Evaluation of strategies, initiatives, or projects by funders, program implementers, and politicians is a common practice to decide whether to continue supporting them. Project evaluation is a methodical procedure for gathering, storing, and organizing data on project outcomes, including short-term outputs (immediate deliverables from a project) and both immediate and long-term project outcomes (changes in behavior, practice, or policy resulting from the project). Project evaluation is described as "the periodic assessment of changes in intended outcomes that can be attributed to a project's activities" (Catherman, 2013). Additionally, project evaluation can be defined as a systematic and objective assessment of an ongoing or completed project or program, its design, implementation, and results.

The goal of project evaluation is to make it easier to assess successfully completed or unsuccessful projects, learn from mistakes made, build on strengths, codify the process, standardize documentation practices for use in the future, and avoid making the same mistakes in future projects (Davidson & Wehipeihana 2010). The primary audience(s) and other stakeholders to whom wishes to report should be consulted at the early stages of developing the evaluation questions. Higher-order questions, such as whether the intervention was worthwhile or could have been accomplished in another way, are asked in evaluation questions that go beyond measures. In general, evaluation inquiries ought to result in additional activities, such as project enhancement, project mainstreaming, or project redesign (Davidson & Wehipeihana 2010).

2.1.2.1 Project Evaluation criteria

Depending on the project's goals and setting, various telecom projects may have different criteria for evaluation. Atkinson (1999) defined evaluation criteria as being relevant, effective, efficient, impactful, and sustainable. The ultimate goal of the criterion is to encourage improved evaluation, which will subsequently result in successful project/program outcomes or sustainable development. The evaluation criteria comprise;

Relevance: When evaluating a project's relevance, it is important to take into account if and to what extent the project's original objectives are still valid, as well as whether its actions and results are in line with those goals (Atkinson, 1999). Are actions and results in line with the planned consequences and impacts?

Efficiency: Efficiency now refers to a project's capacity to use resources, including financial and other inputs, within a certain or limited time frame to generate outputs with the least amount of waste and deviation.

Effectiveness: is a metric used to assess how effectively a project has performed in terms of accomplishing its objectives or moving closer to them. Cause and effect must be taken into account when assessing an initiative's effectiveness. This can be accomplished by assessing observed changes in the output or outcome, attributing observed changes or advancements to the initiative, or calculating the project's relative contribution to the changes that had been observed. How well does the development initiative work? Did it successful in attaining the goals it set forth? [UNDP, 2009]

Impact: The evaluation of project impact takes into account what changed as a result of the project, the actual difference that activities made to recipients, and the number of people affected. Impact is a measurement of a project's overall results that genuinely help to solve or lessen the development issues that gave rise to the project's initial conception (Atkinson, 1999).

Sustainability: Are the benefits or consequences long-lasting? How will the permanence or sustainability of the intervention and its results be determined?

2.1.2.2 Types of Project Evaluation

According to Joy Frechtling, W. (2002). Formative evaluation and summative evaluation are the two different types or stages of evaluation.

Formative evaluation starts during the planning phase and continues all the way through the project's lifecycle. Its goal is to evaluate ongoing project activities and supply information for project monitoring and improvement. Several times within a project's and its activities' developmental lifecycle are when this is done. Before a program or program activity is fully

implemented, this method is used to make sure it is helpful, appropriate, and acceptable. implementation evaluation/process evaluation is one component of formative evaluation

Evaluation of the implementation/process this evaluation's objective is to determine whether the project is being carried out according to plan. Throughout the program, this kind of review may take place just once or multiple times. Make sure a program is in fact in place and, if so, that it is operating in accordance with the given plan or description before evaluating the program's outcome or impact (Joy Frechtling, W. 2002). How successfully did the planning and carrying out of the project go?

Summative evaluation measures if an advanced project has accomplished its declared objectives. While summative assessment usually addresses many of the same issues as progress evaluation, it does so after the project has been established and the change for which a timetable was specified has taken place. Summative evaluation gathers data on outcomes as well as associated procedures, plans, and initiatives that contributed to them. Summative evaluation gathers data on outcomes as well as associated procedures, plans, and initiatives that contributed to them. The evaluation is a determination of value or merit. Usually, decision-making calls for this kind of examination (Joy Frechtling, W. 2002).

outcomes and effectiveness evaluation measures the extent to which the program is producing the outcomes or outcomes that are intended to be produced. Have the needs been generally addressed by the project? Any significant changes that happened, and were they connected to the project? To what extent do the organization, other participants, and stakeholders value the results?

Impact evaluation measures how well a program accomplishes its main objectives.

Ex-ante assessment, mid-term evaluation, terminal evaluation, and ex-post evaluation are further categories that can be made based on the time frames in which they are undertaken (EMI, 2014).

Ex-ante evaluation: A sort of evaluation done prior to the commencement of a project. It is done to determine the needs and potentials of the target group as well as those of its surroundings. It also assesses the viability, outcomes, and ramifications of the proposed project. Future comparisons of the project's effects and effects can be made using this baseline data.

Mid-term evaluation: is conducted as the intended project is being carried out. These evaluations, which are often external ones, are carried out rather early in the project's lifecycle.

It differs from ex-post and terminal evaluations in that adjustments to the ongoing project may still be made in light of the findings.

Terminal evaluation: A terminal evaluation is carried out after the intervention or the entire project activity has exhausted its financing. However, this might not always mean that the project's services and inputs come to an end. In addition to the already-existing records, documents, and outputs, a search for secondary data that are pertinent for comparison should be conducted during the final evaluation. The main goal of recommendations from the terminal evaluation is to enhance future project planning and design.

Ex-post evaluation: It is intended to be in-depth analyses of the long-term effects of a project that has already been carried out. It is conducted after the project activity has ended for a while (often 3-5 years) in order to ascertain its effect on the target group and the neighbourhood.

2.1.3. Monitoring and Evaluation activities

M&E assesses progress, performance, and outcomes with the goal of improving project performance and achieving desired goals [UNDP, 2009]. According to UNDP, (2009), It is a process of ongoing information collecting and assessment to establish whether progress is being made toward explicitly stated goals and objectives and to highlight any unexpected (positive or negative) outcomes from a project and its operations. Both the project cycle and sound management practices include it as a necessary component. In general, monitoring is done to keep track of progress and performance as a foundation for decisions made at different stages of the process of an initiative or project. On the other hand, evaluation is a broader examination of information or experience to determine the degree to which a project has succeeded in achieving its aims.

Monitoring and evaluation should be incorporated into the planning process. This implies that it must be included from the start of every project and cannot be added later. Project monitoring and evaluation should therefore be an essential part of the process from the start of the project through its end and beyond. It makes information flow easier for managers to utilize internally and for stakeholders to use externally who demand accountability and credibility from the public sector and who anticipate seeing results and concrete advantages (Edmunds & Marchant, 2008). M&E may be an additional tool to promote involvement and improved ownership of a project. Participation from various parties or stakeholders is necessary for monitoring and evaluation. It is crucial for incorporating the perspectives of stakeholders, especially the target population (Edmunds & Marchant, 2008).

Monitoring and evaluation can be used to pinpoint issues and their root causes as well as offer potential fixes (Shapiro, 2004). M&E can affect project performance in this way, even though there is a lack of information about it. What tasks are included in M&E, then? The creation of an M&E plan is the most crucial complementary activity, according to UNDP (2009), while undertaking monitoring and evaluation.

2.1.3.1 Monitoring and Evaluation Plan

A monitoring and evaluation plan, according to Bullen (2013), "is a document that provides a brief description of how the entire M&E system of a program or project works." The goals, objectives, and key elements of M&E strategies are detailed in a monitoring and evaluation plan. In other words, an M&E plan serves as a road map for project monitoring and evaluation, as well as for using evaluation results to improve projects and make decisions. An M&E plan outlines every action, component, and activity that must be taken from the project's planning stage until it meets its objectives and produces the expected results. It supports the development, use, monitoring, and refinement of a monitoring and evaluation strategy within a single project or a collection of connected projects (Chandani, 2019). A monitoring and evaluation strategy should be created as soon as the project activities are conceptualized, according to this author (Chandani, 2019). The creation of an M&E plan should happen at the same time as project action planning. Early M&E planning makes ensuring that a solid system is in place to monitor each project intervention and activity and evaluate its effectiveness. Additionally, it helps ensure that project managers and other staff members have a clear knowledge of the primary objectives and that the project is proceeding according to plan. Below are steps to follow to create M&E plan:

Finding the main problem and the necessity for a project: The first phase is defining the primary issue that all team members agree upon and representing it on a flip chart or white board as the trunk of a tree. The team then determines the origins of the issue via several rounds of talks and discourse, seeing those causes as the tree's roots. The group then brainstorms possible issue outcomes and displays them as the branches of a tree. Additional branches for issues, concerns, and decisions can also be added by team members (Chandani,2019).

Project Planning: The second step will be identifying clear and concise goals, objectives and relevant activities.

***Goals*:** The effects that the project hopes to have on the environment or the lives of the recipients in the end

Objectives: Longer-term changes in the environment or the recipients' behavior that are required to meet the overall objective.

***Activities/Input*:** direct interventions and processes of the project

With input from all stakeholders and sponsors, program managers or M&E professionals determine the most crucial M&E queries the project will examine in this stage. When M&E questions are answered, managers will be able to assess their internal processes and capacity in terms of sustainability, vision, leadership, budget, management, etc. The managers can assess the interventions' relevance, effectiveness, impact, and contributions at various points of the project life cycle using the M&E questions(Chandani,2019).

Defining a monitoring and evaluation framework: By the time we get to this stage, we ought to have enough background information to create a framework. A framework clarifies the links between components essential to execution and improves comprehension of the project's aims and objectives. The internal and external factors that could have an impact on a project's success are also described in a framework.

Identifying relevant indicators: It is time to create indicators for monitoring progress towards accomplishing the program's goals after its goals and objectives have been established and a general M&E structure has been put in place. It's always best to use a balanced combination of process, result, and effect indicators.

Process indicators provide information on whether activities are being carried out in line with the plan in order to track the progress of a project.

outcome indicators measure how well program activities succeed in achieving project objectives. These indicators, as opposed to process indicators, give more weight to the project's objectives than to the strategies employed to achieve them.

Impact indicators: A project's long-term goals or impacts are evaluated.

Identifying data collection tools and methodologies: It is now time to find and gather appropriate information to show the real results of the project interventions against our indicators after generating monitoring indicators. To make the process more participatory, M&E experts advise include the project team and stakeholders in the conversation(Chandani,2019).

The project will probably require a number of different data sources in order to address all of the monitoring and evaluation requirements. Data sources can include participants themselves, literature, national statistics, the entire neighborhood, particular residences, or anybody or

anything that might help provide the required data. After selecting the pertinent sources, the next step would be to select the appropriate tools and procedures to collect the data from the source (Chandani, 2019). In addition to the service providers' records and reports, data can also be acquired through surveys, questionnaires, focus groups, case studies, interviews, workshops, and other methods (Edmunds & Marchant, 2008). Before starting the data collection process, it is a good idea to have a team discussion about the issues at hand, such as the type of data that will be used (qualitative, quantitative, or a combination of the two), whether baseline data is already available, which tools and techniques are best for gathering new data, and how the data being gathered will be stored. when the data will be analyzed, and how. responsibility for gathering and studying data.

2.1.5 Tools, methods and approaches for M&E

The telecom industry has various M&E tools and techniques, including surveys, impact assessment, reviews, and evaluations. Surveys are useful for collecting data about customer satisfaction, and impact assessments are typically used to gauge the impact of a telecom project in terms of economic development, job creation, and technology transfer. Depending on the operating context, implementing agency capabilities, and funder criteria, each project has a different M&E requirement. The methodologies, procedures, and tools to be used while creating an M&E plan must be described in order to satisfy the project's M&E requirements (World Bank, 2002). Project managers employ a range of tools and techniques, including project selection and risk management tools and techniques, project initiation tools and techniques, project management planning tools and techniques, project management executing tools and techniques, and project management monitoring and controlling tools and techniques, in order to organize and oversee project activities. M&E systems employ a variety of instruments, including performance indicators, a logical framework approach, theory-based evaluation, formal surveys, rapid appraisal techniques, participatory techniques, surveys that track public expenditures, impact assessments, and cost-benefit and cost-effectiveness analyses. But when choosing a tool, it's important to consider the necessary information, the stakeholders, and the related expenses (World Bank, 2002). The most popular tools for monitoring and evaluating are:

Performance indicators are measurements that are used to evaluate how well a program is achieving its objectives. However, it is important to be attentive when defining the measures that will be utilized to evaluate the project's performance. Although they may include

qualitative observations, indicators are mostly quantitative measurements. They establish the scale or dimension along which performance will be evaluated, but they do not identify a specific degree of achievement. Specify the information that will be gathered to track progress and allow for a comparison of the actual results attained over time with the desired outcomes. They are therefore a crucial management tool for determining the plans and actions of programs depending on performance (World Bank, 2002).

Logical framework is an approach for organizing, monitoring, and evaluating projects. It mostly entails planning for project implementation that is goal- and objective-oriented. Essentially, the log frame is the documented planning or internal policy document. Sometimes, when discussing the underlying M&E processes, the phrases "log frame" and "logical framework approach" are used synonymously. Though the M&E procedures are included in the logical framework approach (LFA), which is again the real policy document.

Theory-based evaluation a justification of how to anticipate that the project will result in the desired long-term changes Theories of change (or logic models) frequently show a chain of results from inputs, activities, and outputs all the way through to outcomes and impact in order to explain the relationships between causes and effects. Theories of change can range from being quite straightforward, like the logic model found inside a typical logical framework, to being extremely complex. An explicit theory of change or logical model that describes the theory of a development intervention or group of treatments serves as the foundation for a theory-based assessment (White H. 2009).

Formal surveys: are used to gather data from a properly chosen sample of individuals. In certain target groups, surveys frequently gather comparable data for a sizable number of respondents. Surveys are often employed to gather qualitative indicators. A formal survey may be used for the provision of baseline data for the purposes of evaluating the strategy, program, or project's performance. Contrasting distinct groups at a specific moment and evaluating the same group's evolution across time Comparing the aims set out in a program or project design with the actual conditions Describing the situation inside a certain community or group (World Bank, 2002).

2.1.6. Cloud computing

The National Institute of Standards and Technology (NIST) defines cloud computing as a platform for easy and on-demand access to a shared collection of reconfigurable computing resources, including networks, servers, storage, applications, and services (Mell & Grance, 2009). The cloud revolutionizes the conventional adoption of IT since it enables the contracting of infrastructure, platforms, and software as services without having to turn them into organizational assets (Hsu, Ray, & Li-Hsieh, 2014). According to (Hsu, Ray, & Li-Hsieh, 2014), this paradigm increases the company's flexibility and scalability because resources may be hired and immediately released when no longer required. Aside from that, it changes how IT services are designed, delivered, scaled, updated, maintained, and priced.

Cloud computing is playing a bigger and bigger role in the telecom sector (Sagar S, 2011). According to research by (Sagar S, 2011), telecommunications companies are in a unique position to play a strategic role in the new market and provide value-added services to revive income streams since they hold the networks on which cloud-based applications are delivered. In the information and communication technology (ICT) value chain, cloud computing offers network service provider's new options to advance. In comparison to cloud service providers from other sectors, network service providers have two key benefits because of their control over the communication infrastructure. They provide home and business services first. Applications and data are increasingly being transferred from user premises and equipment to the internet as cloud computing gets pace.

2.1.7. Influence of human skill on M&E practice

A project's technical viability is determined by the project team. Because of this, teamwork is encouraged by the training and capacity-building of project employees in monitoring, evaluating, and reporting, according to research by Acharya et al. (2006) and Wysocki & McGary (2003). As a result, they can comprehend project deliverables and follow reporting criteria with more ease. Having skilled people is one of the prerequisites, according to Jones et al. (2009), for successfully carrying out project operations, which include monitoring and assessment duties. It is crucial that there are enough staff members for the M&E process to be successful. Nevertheless, take into account if the staff members engaged or given the duty to implement M&E have the required technical expertise and experience. This improves their

comprehension of project deliverables and their ability to meet reporting requirements. As everyone participating in the M&E process learns as they go, it may be advantageous for the business and the assigned or hired individuals if they have the capacity and willingness to advance their M&E abilities. According to Bekalu (2020), one element that has affected the effectiveness of ethio telecom's project expansion M&E activities is the lack of skilled human resources. The company needs a more qualified workforce, regular M&E training, and senior management that is more focused on giving the practice the assistance it requires. The M&E system cannot function without qualified individuals who successfully complete the M&E tasks given to them.

UNAIDS (2008) highlights in its framework for a functional M&E system that it is crucial for the same employees to have the requisite skills for the job in addition to having a committed and sufficient number of M&E staff members. Additionally, the development of M&E human capacity necessitates a variety of activities, such as formal training, in-service training, mentoring, coaching, and internships. Finally, M&E capacity building should pay attention to abilities in leadership, financial management, facilitation, supervision, advocacy, and communication in addition to M&E's technical components. Monitoring and assessment performed by untrained and inexperienced individuals is sure to take a lot of time, cost money, and produce data that may not be useful or relevant. As a result, this will unquestionably affect the success of projects (Nabris, 2002).

2.1.8. Influence of M&E on project success

A growing number of companies are considering project monitoring and evaluation as a means to meet the demand for greater accountability and transparency in project management. M&E, however, encompasses more. Very few businesses have confidence in monitoring and evaluation, despite the fact that it can be a useful tool for improving project performance and sucess (Kamau & Mohammed, 2015, p. 1).

The successful completion of projects in many industries and sectors is one of the primary factors impacting the growth and development of many nations (Maylor et al., 2006). Monitoring and evaluation (M&E) are crucial to the success of project management (Nyonje et al., 2012). Regression analysis of data from a study by Hwang and Lim (2013) revealed that project monitoring and assessment would be beneficial. One of the five key success factors that the data showed to have a statistically significant positive correlation with is monitoring and

evaluation (Kamau & Mohammed, 2015, p. 1). According to Kamau and Mohammed (2015), monitoring and evaluation appear to be related to project performance in that they both have an impact on and contribute to the project's success. As a result, many stakeholders, including project officers, M&E officers, and all program personnel, may find considerable value in project monitoring and evaluation (Marangu, 2012).

2.1.9. M&E and its significance to Organizations

The need by the stakeholders for accountability and transparency as well as showing the performance of the project has significantly increased the requirement for M&E as a management tool in the present (Gorgens 2009). Organizations like telecommunications companies and government agencies also frequently use M&E to improve project development performance and show transparency.

The impact of M&E on the telecom industry is significant, as it ensures that projects are implemented efficiently and effectively. M&E provides insights into critical areas that require improvements, identifies factors that contributed to project success or failure, and provides guidance for future projects. The information generated from the M&E process can be used to inform decision-making, including budget allocation, project prioritization, and resource allocation. An organization can benefit from monitoring and evaluation by leveraging feedback from mid-term, terminal, and ex-post evaluations to improve project design. Organizations may learn about the sorts of interventions that are effective (i.e., what works, what doesn't, and why) by looking at the results and impacts of interventions as well as the advantages and disadvantages of how they were implemented (EMI, 2014).

2.2. Empirical Review

Some empirical literatures that were related to the research are reviewed by the researcher and presented as follows:

According to Yemisrach (2021) research, implementation teams have frequently been given the task of carrying out projects in the telecommunications sector. Most projects in the telecommunications sector lack a thorough monitoring plan and as a result fail to meet their pre-established goals. The design and construction of an M&E system is one method for addressing the demand for project success through achievement. Designing and building an

M&E system is necessary to address the attainment through project success demand. M&E keeps track of the outcomes that are produced (or not) by governments and other organizations. Watiti (2018) researcher has offered suggestions for the monitoring and evaluation of telecom projects. These include adequate stakeholder participation, appropriate and sufficient finance, improved information management systems, and appropriate training and capacity building of project teams. The findings revealed a serious lack of experience in the monitoring and evaluation of projects in the telecom sector; thus, Safaricom should make an effort to address the issue of the absence of coordinated training and create structures, procedures, and manuals for monitoring and evaluation. Training in monitoring and evaluation (MME) should be required.

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.1. Introduction

This section explains how the data used in the research was obtained, processed, analysed and interpretation done to achieve the objectives of the study. The elements of methodology considered in this study include research design, target population, sampling and sampling techniques, data collection procedures, model specifications and methods of data analysis. Details of these have been discussed in the succeeding sections.

3.2. Research Approach

The research approach used is quantitative and qualitative because it offers greater chances to respond to research questions and allows for a better assessment of how much the research findings can be believed and what conclusions can be drawn from them. In order to gather information, the researcher conducted in-depth interviews, held focus groups, and provided semi-structured questionnaires to the respondents. According to Creswell (2014), research approaches are strategies and guidelines for conducting studies that cover everything from general hypotheses to specific techniques for gathering, analysing, and interpreting data. In this sense, the fundamental research methodologies that represent the two extremes of the continuum are quantitative and qualitative research procedures.

3.3. Research Design

The descriptive method of surveying was adopted since the aim of the study was to evaluate the practice of project monitoring and evaluation in the context of the cloud computing project for ethio telecom. The research employed specific descriptive statistics to compare and contrast the performance elements between the actual and projected achievement. When facts are needed, descriptive survey design works well and produces reliable findings. This technique also enables a researcher to collect data for a predetermined amount of time and analyze the findings while taking into account the current circumstances (Saunders, 2012).

3.4. Sample Size and Sampling Technique

The researcher used a non-probability sampling technique in this research. Because according to Saunders (2012), Non-probability sampling offers a number of different alternative approaches to choose samples based on personal preference. Purposive sampling, a non-probability sampling technique, is utilized in this study because it allows the researcher to exercise discretion in choosing respondents who will best help them answer their research questions and achieve their goals.

Table 3.1 Sample size

Category of respondent	Number of respondents
Project managers	1
Project staffs	35
Other project stakeholders	9

3.5. Method of Data Collection and Source

3.5.1 Questionnaires

Data collection instruments, both the questionnaires and interview questions were developed by the researcher. When finalized, the questionnaires were distributed to respondents after a short briefing about the objective of the assessment. Two major data-collecting methods were employed by the researcher. To collect primary data from key informants semi-structured open-ended interview questions along with questioners were deployed.

The questionnaire contains mainly closed-ended and a few open-ended questions. It is an appropriate instrument to obtain a variety of opinions within a relatively short period. The questionnaire statements were evaluated on a 1-5 Likert scale, where _1'indicates strongly disagree with the statement, _2'disagree, _3'neutral, _4'agree and _5'strongly agree with the statement. Additionally, respondents were asked to select "yes" or "no" in response to the question of whether the company's M&E system for projects has a high level of structure and a defined M&E plan, guideline, or framework.

3.6.2 Interviews

The study's goals and research questions were taken into account when creating the semi-structured interview guide. interviews with the project manager and a project monitoring and evaluation specialist in person. To aid in detecting, analysing, and determining the issues, as

well as making the necessary recommendations, all relevant factors have been included. The key benefit of adopting a semi-structured open-ended question was that it allowed the respondent to go into greater detail about any topics that called for more explanation.

3.6. Methods of Data Analysis

SPSS (Statistical Package for Social Sciences) was used to automatically analyse the data that was obtained. Because it manages a lot of variables, the SPSS package was chosen. Data analysed descriptively was presented in tables because they gave a systematic record of analysis in an easy-to-understand format.

According to Saunders (2012), descriptive analysis entailed tabulating and describing data obtained from a sample of the population. Therefore, frequency distribution tables were used to display the results. In addition, summary tables and charts were also used for describing data. The results of the interview questions were also integrated to the responses of the questionnaires and analysed accordingly. Finally, conclusions were made based on the findings of the study and recommendations were forwarded built on the data analysed.

3.7. Reliability Test

The degree to which a questionnaire's items are related to one another is referred to as reliability. According to Saunders et al., (2012), reliability determines whether or not a questionnaire will consistently yield results at various times and under various circumstances. One of the most commonly accepted measures of reliability is Cronbach's alpha. It measures the internal consistency of the items in a scale that is, how closely related a set of items are as a group. It is considered to be a measure of scale reliability. The normal range of Cronbach's coefficient alpha value ranges between 0-1 and the higher values reflect a higher degree of internal consistency and values less than 0.5 are unacceptable. Internal consistency involves correlating the responses to each question in the questionnaire with those to other questions in the questionnaire.

Table 3.2: Reliability sample testing scale

Reliability Statistics

Cronbach's Alpha	N of Items
.742	13

Saunders et al., (2012), states that internal consistency using Cronbach's alpha can be described as follows.

$0.9 \leq \alpha \leq 1.0$ Excellent

$0.8 \leq \alpha < 0.9$ Good

$0.7 \leq \alpha < 0.8$ Acceptable

$0.6 \leq \alpha < 0.7$ Questionable

$0.5 \leq \alpha < 0.6$ Poor

$0.0 \leq \alpha < 0.5$ Unacceptable

This study's reliability scale result is 0.742, which shows that there is consistency. As a result, it can be concluded that the survey is trustworthy and ready to be given to respondents.

3.8. Ethical Consideration

Respondents are assured that the information they provide is confidential and used for academic purpose only, moreover a statement conforming the prohibition of including any identity details or personal references in the questionnaire. This was to avoid any biased response or unauthentic data provided by respondents and to make participants certain that he/she cannot be traced; this would offer them enough room to express their ideas and point their responses freely and safely. The data gathered in process of the study was kept confidential and would not be used for any personal interest and the whole process of the study. The study was controlled to be within acceptable professional ethics.

CHAPTER FOUR

DATA ANALYSIS AND INTERPRETATION

4.1. Introduction

In this section, summaries of the data obtained in the study are analysed, interpreted and discussed in detail. The data collected from questioners and interviews was analyzed using Google Form and Excel utilizing frequencies and means.

A total of 45 questionnaires which focused on the monitoring and evaluation practice of the company were distributed to employees who directly participate in the M&E process, project manager and project planning team. Among the 45 questionnaires distributed to respondents, 41were filled and returned.

A response rate of 91.11% was arrived at using the following formula provided by Welman (2007):

$$Response\ Rate = Number of Complete Surveys / Number of Participants Contac\text{ted}$$

$$=41/45=91.11\%$$

Thus, out of the 100% questionnaires distributed, 91.11% were filled and returned. Therefore, the rest of this Chapter presents the results of the analysis of the data obtained from the questionnaire. The questionnaire contains close ended questions and some open-ended questions which will focus on issues such as by whom M&E is conducted, project planning and project M&E links on the process and the M&E system as a whole. Most items in the questionnaire are arranged in a form of Likert items to capture the feelings of respondents in scale ranging from 1 to 5. To preserve the accuracy of the information, the data has been examined in Google Form and Excel. A self-administered semi-structured open-ended interview questionnaire is also utilized in addition to this to aid the researcher in clarifying the topics brought up. All of the interview questions were written in a way that corresponds to the information provided in the questionnaire.

4.2. Demographic Information

This study needed to establish the age, gender, and educational levels of the respondents. This was necessary to help determine the levels of expertise and experience often involved in the management of projects and control of the cloud computing project monitoring and evaluation practice at ethic telecom. The gender characteristics would help determine if there is equitable

distribution of both genders in project management and monitoring and evaluation. If the gender distribution of the sample is found to be balanced, then it would help clear hypotheses that the results, if found to be twisted in a particular direction, are a result of gender-based bias and decisions. All other analyses are based on the thematic concerns and objectives as highlighted by the objectives of the study.

4.2.1. Gender of the Respondents

Table 4.1: Gender of the Respondents

Gender	Frequency	Percent	Valid Percent	Cumulative Percent
Male	29	70.7	70.7	70.7
Female	12	29.3	29.3	100.0
Total	41	100.0	100.0	

Source: Own survey (2023)

From the results of Table 4.1, the male respondents formed majority of the respondents 29 (70.7%) while the female respondents were 21 (29.3%). A margin of 41% in a sample size of 41 may not give an entire picture of the true representation but it points to unequal representation of the two gender.

4.2.2 Age of The respondents

From Table 4.2, it is clear that there were few 4(9.8%) respondents below the age of 30. From this response, it can be alluded that Most of the respondents must have had at least a year handling projects. The modal age of all the respondents fell in the gap between 31 and 40. This group formed the highest proportion of respondents, at 34 (82.9%). The age group between 41 and 50 were represented by 3 respondents, representing 7.3%. The distribution of the respondents implies that, the age groups below 30 years old are not involved actively in management of projects and the monitoring and evaluation process and hence do not see need for their involvement in the changes.

Age	Frequency	Percent	Valid Percent	Cumulative Percent
>=30 Years	4	9.8	9.8	9.8
31-40 Years	34	82.9	82.9	92.7

	41-50 Years	3	7.3	7.3	100.0
	Total	41	100.0	100.0	

Table 4.2 Age of The respondents

4.2.3 Education Level of respondents

From Table 4.3, Majority of the respondents are holders of Post graduate degree in different fields 32 (78%) while degrees holders account for 8 (19.5%) of the respondents. While degree holders made up the majority of the project teams, postgraduate degree holders were primarily specialists in project management teams and a representative of IT departments.

Qualification	Frequency	Percent	Valid Percent	Cumulative Percent
Bachelor's degree	8	19.5	19.5	19.5
Master's Degree	32	78.0	78.0	97.6
Certified in Project Management	1	2.4	2.4	100.0
Total	41	100.0	100.0	

Table 4.3: Education Level of respondents

4.2.4 Number of years on the organization

Table 4.4 shows that, the majority of respondents (n=31; 75.6%) employed by the organization for more than 8 years, demonstrating that the majority of respondents have an important understanding of the company's overall strategy and objectives. The other respondent (n=10; 24.4%) have also worked 5-8 years in the organization.

Experience	Frequency	Percent	Valid Percent	Cumulative Percent
5-8 Years	10	24.4	24.4	24.4
>8 Years	31	75.6	75.6	100.0
Total	41	100.0	100.0	

Table 4.4: Number of years on the organization

4.2.5 Current position in the organization

According to Table 4.5, (n=16;39%) and (n=14;34%) of the respondents are specialists in project monitoring and evaluation, respectively. This indicates that they are very knowledgeable and adept at managing projects within the organization. one of the requirements for carrying out project operations, which include monitoring and evaluation tasks, effectively is having skilled staff (Jones et al, 2009). The remaining respondent (n=6;7.3%) is knowledgeable about the technical side of the cloud computing project.

Current position	Frequency	Percent	Valid Percent	Cumulative Percent
Project Monitoring Specialist	16	39.0	39.0	39.0
Project Evaluation Specialist	14	34.1	34.1	73.2
Project Monitoring Expert	1	2.4	2.4	75.6
Project Monitoring Expert	1	2.4	2.4	78.0
Technical Experts	6	14.6	14.6	92.7
Project Coordinator	3	7.3	7.3	100.0
Total	41	100.0	100.0	

Table 4.5: Current position in the organization

4.2.6 Number of years on current position

The result from Table 4.6, Everyone involved in the M&E process learns as they go, according to study by Acharya et al. (2006) and Wysocki & McGary (2003). If the assigned or hired personnel have the potential and willingness to develop their M&E skills, it may be helpful for the organization and them. The majority of respondents (n=28, 68.3%) indicated that they had been in their current position for 2 to 5 years, indicating that they had been gaining experience with various projects' M&E processes throughout that time. The following respondent (n=9,22%) has worked for over five years.

Experience	Frequency	Percent	Valid Percent	Cumulative Percent
<1 Years	4	9.8	9.8	9.8
2-5 Years	28	68.3	68.3	78.0
>5 Years	9	22.0	22.0	100.0
Total	41	100.0	100.0	

Table 4.6: Number of years on current position

4.3. The project's plan emphasizing on its goal setting and M&E plan

Respondents were asked to rate their level of agreement with regard to project planning that emphasized M&E plan in order to establish a baseline and better understand the specific objectives of this study. From 1 to 5, with 5 emphasizing "Strongly agree," responses were weighted and ranked. 1 being "strongly disagree," 2 being "disagree," 3 being "neutral," 4 being "agree," and 5 being "strongly agree" are many ways to answer this question.

Statements (n=41)	**Frequency ***						
	1	**2**	**3**	**4**	**5**	**Mean**	**Std. Deviation**
During project planning, set aside money for monitoring and evaluation.	2	9	2	26	2	3.41	1.048
The M&E planning process is included in the project plans.		6	15	5	15	3.71	1.123
The planning process is utilized and is well-detailed.		2	8	27	4	3.80	0.679
The planning process aids in determining the cost of the M&E resource requirements.	1	4	8	25	3	3.61	0.862
M&E activities schedule clearly presented in the plan			19	17	5	3.68	0.687
At the planning of the project, M&E staff roles and duties were established.	1	19	12	6	3	2.78	0.988
The project is able to create a management system to keep it on track.		5	4	20	12	3.95	0.947
Total						3.56	

Table 4.7 The project planning emphasizing on M&E

Table 4.7 gives an overview of how the project's plan emphasizing on its goal setting and M&E plan. The results reveal that budgets for project monitoring and evaluation are set aside during

project planning, as shown by the mean score of 3.41and a standard deviation of 1.048; Conversely, the mean score of 3.71 and a standard deviation of 1.123 indicates that the M&E planning process is incorporated into the project plans. Additionally, as shown by a mean score of 3.8 and a standard deviation of 0.679, the respondents agree that the planning approach is utilized well and is also quite detailed. The respondent strongly agreed with the M&E activities schedule, which was clearly provided in the plan (mean 3.68). Additionally, project manager interviews support the fact that the M&E plan received a lot of attention during the project planning phase.

4.4 The readiness preparation particularly the level of training of the team

A project's ability to meet its technical goals depends on the project team. According to research by Acharya et al. (2006) and Wysocki & McGary (2003), teamwork is facilitated by the training and capacity building of project staffs in monitoring, evaluation, and reporting. The survey's findings indicate that 26 respondents concur that the project team obtains technical training to enable M&E. They also strongly concur, with an average response of 4.05, that team training has affected project monitoring and evaluation. The project's budget allocation for employee training and development received a second-high response average (3.93). Finally, respondents strongly agree that the project selects qualified persons to carry out the M&E tasks, with an average response of 3.54. This implies that organizations give readiness preparation more of a priority, especially a team's degree of training, which is certain to affect monitoring and evaluation.

Statements (n=41)	**Frequency ***						
	1	**2**	**3**	**4**	**5**	**Mean**	**Std. Deviation**
The project team receives training to provide them with the technical know-how needed to complete M&E		4	9	26	2	3.63	0.733
The project selects qualified individuals to perform the M&E tasks.	1	5	7	27	1	3.54	0.840
To make sure the appropriate skills are gained to manage the M&E activities, a training requirement analysis is performed for the project.		7	7	23	4	3.59	0.894
There is sufficient budget allocated for staff training and development		1	6	29	5	3.93	0.608

Team training have had an impact on this project Monitoring and Evaluation	3	4	22	12	4.05	0.835
The M&E department in your company is strategically situated and has the necessary resources.	12	2	25	2	3.41	0.974
Total					3.69	

1=Strongly disagree, 2=Disagree, 3=Neutral, 4=Agree and 5=Strongly agree.

Table 4.8 The readiness process respecting M&E

4.5. The organizational culture of M&E

A set of six questions was created to examine and evaluate the organizational culture of M&E based on experience with cloud computing projects. The respondent's opinion of the company's M&E system was the subject of the first question. 53.7% of respondents agreed with this statement, while 46.3% strongly disagreed, according to the table's results.

Does the company's M&E system for the project have a good level of organization?

	Frequency	Percent	Valid Percent	Cumulative Percent
Yes	22	53.7	53.7	53.7
No	19	46.3	46.3	100.0
Total	41	100.0	100.0	

Table 4.9 Organization of the M&E System

The second question is evaluated if the organization has a formal M&E plan, framework, and procedures. M&E plans are used as a guide for project monitoring and evaluation, as well as for using evaluation data to enhance projects and make decisions, based on the literature covered above. For the organization's formal M&E plan, guidelines, and framework, (49%) of respondents claim there is one, while (51%) disagree.

Table 4.10 Existence of an M&E plans, guidance, or framework

Does your company have a formal M&E plan, guideline, or framework?

	Frequency	Percent	Valid Percent	Cumulative Percent
Yes	20	48.8	48.8	48.8
No	21	51.2	51.2	100.0
Total	41	100.0	100.0	

4.5.1 An assessment of the practice of the project monitoring and evaluation

4.5.1.1 Types of Monitoring employed

Table 4.11 presents the type of monitoring employed for the cloud computing project. The majority of the respondents (51.2%) stated that process monitoring and technical monitoring (22%) were the most frequently employed type, with 21 and 9 individuals applying them correspondingly. Overall, it appears that the project team employed process monitoring to monitor cloud computing project. This finding was confirmed by an in-depth interview with the project manager, providing justification for why process monitoring helps to assess ongoing project operations and offers information for project monitoring and improvement.

What type of project monitoring methodology does the company employ?

	Frequency	Percent	Valid Percent	Cumulative Percent
Process monitoring	21	51.2	51.2	51.2
Technical monitoring	9	22.0	22.0	73.2
Financial monitoring	5	12.2	12.2	85.4
Quality monitoring	6	14.6	14.6	100.0
Total	41	100.0	100.0	

Table 4.11: Types of Monitoring employed

The majority of respondents (87.8%), as shown in the table 4.12, said that the cloud computing project is monitored on a weekly basis. The cloud computing projects are monitored monthly and annually, respectively, according to the remaining 7.3% and 4.9% of respondents. Thus, weekly monitoring of cloud computing initiatives is done. This result is consistent with the project manager's interview input. The departmental project M&E team at the company is the only team capable of managing all of the company's M&E, according to the project manager.

Table 4.12 Number of times cloud computing project monitored

How often the projects monitored?

	Frequency	Percent	Valid Percent	Cumulative Percent
Weekly	36	87.8	87.8	87.8
Monthly	3	7.3	7.3	95.1
Annually	2	4.9	4.9	100.0
Total	41	100.0	100.0	

4.5.1.2 Contribution of monitoring tool for project effectiveness

The following five questions were distributed, with the results shown in Table 4.13, in order to assess the contribution of the monitoring type used to the project's effectiveness. The initial inquiry focused on how efficient the tool was at gathering relevant data. The majority of participants said the tool was useful for gathering pertinent information, as indicated by the mean value of 4.78 and standard deviation of 0.475. The monitoring technique effectively identifies project issues or challenges and provides real-time data or updates on project progress, which are then rated. With mean scores of 4.41 and 4.76, the participants mostly concurred that the method helped them to uncover difficulties are addressed effectively and provided real-time data on the project's progress. Respondents also concurred that the tools supply them with crucial information for making decisions and served to gauge the success of the project, with mean scores of 4.59 and 4.61 and standard deviations of 0.547 and 0.494, respectively, respectively. Project manager interviews revealed that the monitoring tool had improved visibility into the project's status.

Table 4.13 Effectiveness of the monitoring tool employed

Statement(n=41)	**Frequency ***						
	1	**2**	**3**	**4**	**5**	**Mean**	**Std. Deviation**
The monitoring method used effectively gathers relevant information.	0	0	1	7	33	4.78	0.475
The project's difficulties or issues are efficiently identified by the monitoring technique.	0	0	0	24	17	4.41	0.499
The monitoring method offers real-time data or updates on project progress.	0	0	0	10	31	4.76	0.435
The inputs gained through the monitoring technique were important for directing decision-making processes.	0	0	1	15	25	4.59	0.547
The monitoring technique serves in measuring and tracking Project performance in general.	0	0	0	16	25	4.61	0.494
Total						**4.6**	

4.5.1.3 Types of evaluation employed

The result of Table 4.14 showed that the majority of respondents (73.2%) indicated the project has never been evaluated when asked about the type of evaluation that was employed. 24.4% of respondents gave the answer "Process evaluation", which is carried out as soon as the

project's execution starts or throughout the operation of a current project, gives organizations the ability to evaluate how effectively their project plans and activities are operating. The finding that the project has never been evaluated is further confirmed by the interview with the project manager.

What type of evaluation the company employ to measure the effectiveness of the project?				
	Frequency	Percent	Valid Percent	Cumulative Percent
Process evaluation	10	24.4	24.4	24.4
Outcome evaluation	1	2.4	2.4	26.8
Never evaluated	30	73.2	73.2	100.0
Total	41	100.0	100.0	

Table 4.14: Types of Evaluation employed

4.5.2 M&E tools, processes, or methods employed

According to the presented table, the performance indicators are purportedly used as M&E tools and procedures, according to 33 respondents (80.5%), the majority of respondents. Performance indicators are a crucial management tool for determining the plans and actions of programs depending on performance (World Bank, 2002). This result aligns with the project manager's feedback during the interview.

What type of M&E tools, processes, or methods does the company employ?				
	Frequency	Percent	Valid Percent	Cumulative Percent
Performance indicators	33	80.5	80.5	80.5
Logical framework approach	5	12.2	12.2	92.7
Formal surveys	3	7.3	7.3	100.0
Total	41	100.0	100.0	

Table 4.15: M&E tools, processes, or methods employed

4.5.3 The contribution of M&E tools for project success

M&E is frequently used by organizations to increase the efficiency and success of the planning and execution of projects. A survey was carried out to see if M&E contributed to successfully completing the cloud computing project. The findings demonstrated that most respondents (mean score of 4.71 and standard deviation of 0.461) agreed that the M&E tools employed in the project considerably contributed to its overall success. The M&E tools are a crucial part of project planning and implementation for success. According to responses, the M&E tools provide accurate and reliable data for tracking project progress and outcomes (mean score of 4.85), and they also help identify areas for improvement and strategic adjustments needed for project success (mean score of 4.22). (mean value of 4.44), and the presence of an efficient M&E framework increases the likelihood of a project's success (mean value of 4.24) were also positive findings.

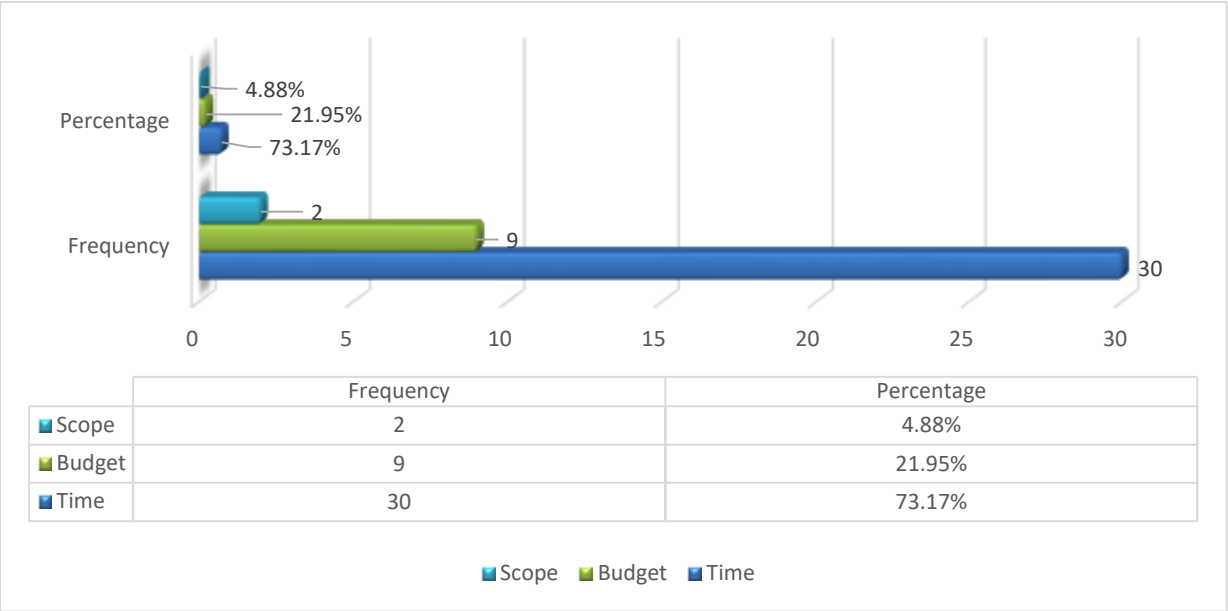
Statements (n=41)	**Frequency ***						
	1	**2**	**3**	**4**	**5**	**Mean**	**Std. Deviation**
The M&E tools used in the project significantly contribute to its overall success.	0	0	0	12	29	4.71	0.461
The M&E tools provide accurate and reliable data for tracking project progress and outcomes.	0	0	0	6	35	4.85	0.358
The M&E tools help identify areas of improvement and strategic adjustments needed for project success	0	0	0	32	9	4.22	0.419
The M&E tools effectively measure the achievement of project objectives and targets.	0	0	10	28	3	3.83	0.543
The M&E tools provide valuable insights for continuous improvement in project activities.	0	0	0	29	12	4.29	0.461
The M&E tools are an essential component of project planning and implementation for success.	0	0	0	23	18	4.44	0.502

The chances of a project's success are increased by the presence of an effective M&E framework.	0	0	8	14	19	4.27	0.775
The tools for monitoring and evaluating the project's progress were successful.	0	5	17	15	4	3.44	0.838
Findings from the project's monitoring and evaluation have been used to guide learning and decision-making.	0	4	7	28	2	3.68	0.722
The monitoring and evaluation framework for the project enables ongoing improvement of project results and impacts.	0	0	0	26	15	4.37	0.488
Total						**4.2**	

Table 4.16: M&E tools contribution for project success

4.6 Basic element of the project M&E plan

According to the respondent, time, money, and scope make up the major three elements of the project monitoring and evaluation plans. The majority of respondents (73.17%) and the project manager concur that time has a significant impact on the effectiveness of project M&E practices, they mention the new competitor entering the market as the reason why M&E activities are not conducted frequently enough. Additionally, collecting data too frequently can be harmful to M&E effectiveness as it can be time-intensive. The following chart illustrates the factors respondents indicated had a substantial impact on the M&E effectiveness of the cloud computing project.



	Frequency	Percentage
Scope	2	4.88%
Budget	9	21.95%
Time	30	73.17%

Chart 4.1: Basic element of the project M&E plan

4.7. Adoption of experiences from a different project

According to the project manager interview, the project team gained a lot of experience by using some of the best practices from earlier projects, particularly the Moderate Data Center project. The moderate data centre project frequently used the ERP system to simplify the procedures of data collection, processing, and reporting. The project team adopted this strategy by investigating the application of this system for data analytics, data visualization, and data gathering tools. Additionally, the project manager emphasized throughout the interview that the M&E tools helped to successfully launch the project's first phase within the scheduled timeframe, scope, and budget.

CHAPTER FIVE
SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

The study's key conclusions are outlined in this section, along with some recommendations for implementation by the relevant parties in order to create the best project M&E system and practice.

5.1. Summary of findings

This study attempted to assess risk management practices and its effect on financial sustainability in international CSOs projects in Ethiopia: the case of World Vision Ethiopia. Below are the summaries of major findings:

- The first objective of the study was to assess project planning, with a focus on M&E design. The results show that the M&E planning procedure was included in the project plans. They overwhelmingly concurred that the planning process is thorough and effective. It is also generally acknowledged that calculating the cost of the M&E resource requirements depends on the project's capacity to create a management system to keep it on track. Similarly, respondent agreed with the project plan's depiction of the M&E activity schedule. Budgets for project monitoring and evaluation are set aside during project planning. The M&E activity schedule is described in the project plan. The roles and responsibilities of the M&E staff were determined throughout the project planning phase. Additionally, project manager interviews support the fact that the M&E plan received a lot of attention during the project planning phase.
- This study's second objective was to assess the basic elements of project M&E and determine which ones were significantly affecting ethio telecom’s project M&E practices. The three primary components of a cloud computing project are time, budget, and scope. According to the majority of respondents (73.17%), time has a significant impact on how effectively M&E procedures function; the project manager points out that the introduction of a new competitor as the reason why M&E activities aren't performed frequently enough.
- The third objective of the study was to assess the readiness of preparation, in particular the team's level of training, which was bound to affect monitoring and evaluation. According

to the literature review in Chapter 2, the technical goals of a project must be accomplished by the project team, and for the M&E process to be effective, there must be an acceptable staffing level. The study found that majority of respondents concur that the project crew is given technical training so they can finish M&E. They also concur wholeheartedly that project monitoring and evaluation have been impacted by team training. Qualified people are chosen to perform the M&E activities using funds designated for project-related personnel development and training throughout the project. The overall finding show that the organizations give readiness preparation more of a priority, especially a team's degree of training, which is certain to affect monitoring and evaluation.

- The fourth and last objective of this study was to assess the organization's general M&E culture and its impact on the project's monitoring and evaluation. Based on the degree of general agreement on this subject, the study found that most respondents disagreed that the organization had a well-established M&E system and a formal M&E plan, guidance, and framework for the organization. majority of the respondents (51.2%) stated that process monitoring and technical monitoring (22%) were the most frequently employed type, with 21 and 9 individuals applying them correspondingly. Overall, the project team used process monitoring to keep an eye on the cloud computing project. The total mean average (4.6) demonstrates that the respondent firmly agreed with the monitoring tool's contribution to the project's success. Regarding the type of evaluation used The project manager's interview and 33 respondents' (80.5%), responses further support the fact that the project has never been appraised.
- The study found that the respondents strongly agreed that M&E tools provide accurate and reliable data for monitoring project progress and outcomes, with a total mean average of (4.2). From the M&E tool they have used, they also help in identifying key adjustments and areas for improvement that are required for project success. The project manager also made a point of highlighting how the M&E tools supported the project's first phase's successful launch within the planned timetable, scope, and budget throughout the interview. Additionally, the project team adopted the use of the ERP system as a result of the lesson learned from the MODERN DATA CENTER project, which was another factor in the successful completion of the project's first phase.

5.2. Conclusions

The study's findings were analyzed and the following conclusions were drawn.

- The study revealed at the project planning stage, the cloud computing project placed a strong emphasis on its M&E activities.
- The project team receives technical training in order for them to complete M&E, which was believed to have had a significant impact on the project monitoring and evaluation procedures for the cloud computing project.
- The claim that the organization has a formal M&E plan, framework, and direction based on the overall level was rejected by the respondents.
- Weekly analyses of the project's data are conducted using process monitoring as much as is practical, in addition to quality and technical monitoring. The process monitoring which is used to monitor cloud computing project found to be a main support for project effectiveness in providing relevant information, real-time data and an input to follow the project performance and progress. The company employs process evaluation for evaluation purposes, although this is not done for cloud computing projects. The performance indicator utilized as an M&E tool has been found to improve the project's effectiveness and success.
- The three main elements of a cloud computing project are time, scope, and budget. Of these three, time has had a significant impact on the project's M&E effectiveness.
- The company used lessons learned from earlier project M&E practices to implement an ERP system for data collection, analysis, and reporting.

5.3. Recommendation

The following key recommendations are given in light of the study's findings, conclusion, and literature review on monitoring and evaluation practice.

- ethio telecom must implement a formal M&E system and make it accessible to all employees. Due to the crucial impact of M&E on project effectiveness, this study additionally recommends that M&E be institutionalized in organizations by ensuring the existence of an M&E unit with suitable staffing.
- Based on the review, there are several practical recommendations that can be adopted to improve M&E practices in the organization. First, ethio telecom should establish standard M&E frameworks based on international best practices. Second, there should be a focus on employing technology-based M&E tools to streamline data collection and analysis, including the use of mobile-based data collection and analytics software. Third, M&E processes should be integrated into project implementation and should involve

all stakeholders, including beneficiaries, project managers, and implementation partners.

- Establish the organization's goals, objectives, and key performance indicators before launching the M&E system. Conduct a needs analysis to determine the information, resources, and tools needed to create a strong M&E system. Create M&E plans that outline the procedures, timing, tools for gathering data, and methods for analysis required to assess the program.
- Assure the personnel that they comprehend the M&E process and possess the knowledge and abilities to gather and evaluate data by providing them with training and support. Include participants in the M&E process, such as recipients, donors, employees, and partners. For data gathering, processing, visualization, and reporting, use technology such as software. To make sure the M&E system satisfies the needs and objectives of the company, it must be continuously evaluated, monitored, and improved. Following the steps, the company must set up a monitoring and evaluation plan, guide, and structure at the organizational level in order to have a successful M&E system.

5.4. Agenda for future research

The research's findings show that the company did not conduct a project evaluation, so this project's evaluation results are not included in the research. Therefore, project evaluation factors must be included in future related research.

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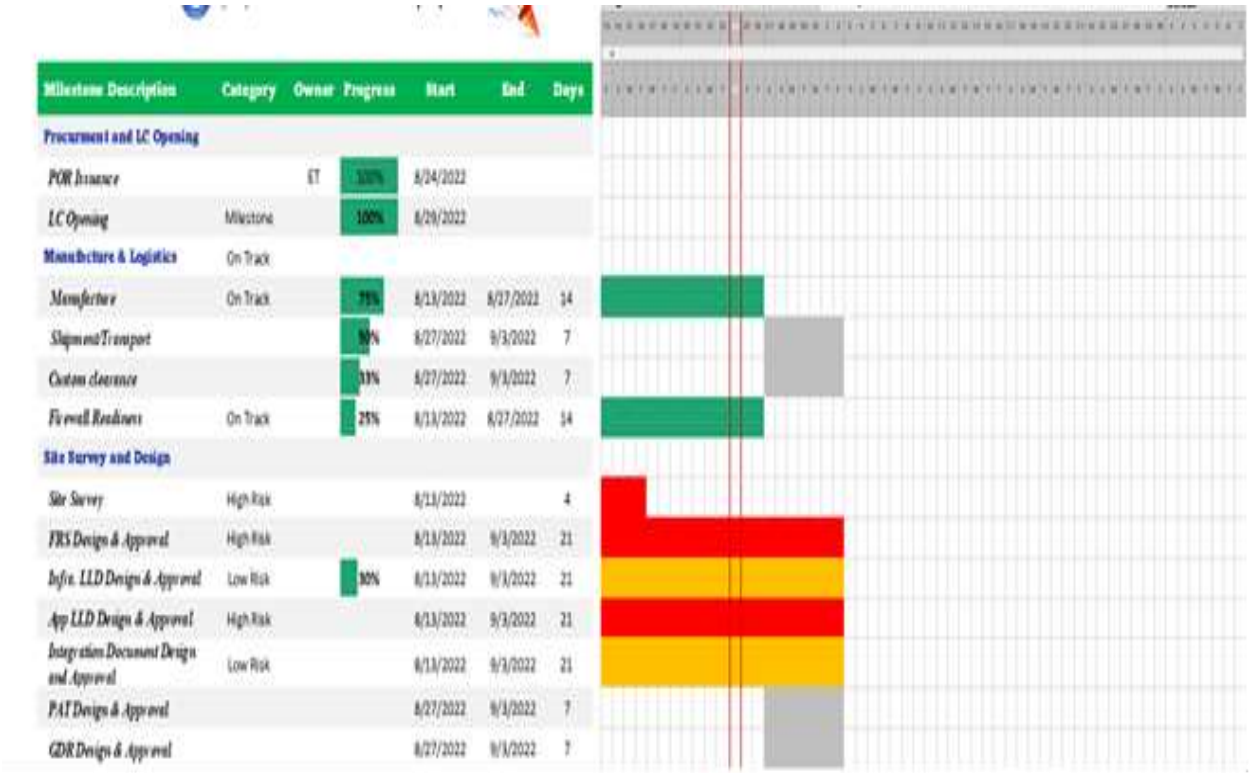
Appendix I – **Weekly Report**



Milestone Description	Category	Owner	Progress	Start	End	Days
Procurment and LC Opening						
POR Issuance		ET	100%	8/24/2022		
LC Opening	Milestone		100%	8/29/2022		
Manufacture & Logistics	On Track					
Manufacture	On Track		75%	8/13/2022	8/27/2022	14
Shipment Transport			50%	8/27/2022	9/3/2022	7
Custom clearance			33%	8/27/2022	9/3/2022	7
Firewall Readiness	On Track		25%	8/13/2022	8/27/2022	14
Site Survey and Design						
Site Survey	High Risk			8/13/2022		4
FRS Design & Approval	High Risk			8/13/2022	9/3/2022	21
Infra. LLD Design & Approval	Low Risk		30%	8/13/2022	9/3/2022	21
App LLD Design & Approval	High Risk			8/13/2022	9/3/2022	21
Integration Document Design and Approval	Low Risk			8/13/2022	9/3/2022	21
PAT Design & Approval				8/27/2022	9/3/2022	7
GDR Design & Approval				8/27/2022	9/3/2022	7

Appendix II - **Questionnaire**

ADDIS ABABA UNIVERSITY

COLLEGE OF BUSINESS AND ECONOMICS

SCHOOL OF COMMERCE

Department of Project Management

Dear Respondent,

I am a student at Addis Ababa University pursuing a Master degree in project management. As part of this course requirement, I am expected to carry out a research on Monitoring and Evaluation Practices at Ethio-Telecom: The Case of Cloud Computing Service Project. I therefore, humbly request for your assistance and cooperation in responding to the questions attached herewith. The information given be treated with utmost confidentiality and was used only for the purpose of the study.

Looking forward for your response and cooperation

Merhawit Habtu.

Instructions:

This questionnaire is meant for collecting information in my academic study: Monitoring and Evaluation Practices at Ethio-Telecom: The Case of Cloud Computing Service Project. Kindly respond by ticking the provided alternative answers or writing a comment on the space provided. All information provided will treated as confidential and will be used for the intended purpose. The respondent is not required to disclose their identity.

SECTION 1: BACKGROUND INFORMATION

1. What is your gender?

- Male
- Female

2. What is your age bracket?

- Under 30 years
- 31 – 40 years
- 41 – 50 years

3. What is your highest level of education qualification?

- Diploma
- Bachelor's degree
- Master's degree
- certified in project management

4. How long you have been in this organization? *

- < 5 year
- 5-8 years
- >8 years

5. What is your current position in the organization? *

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6. How long you have been in this position? *

- < 1 year
- 2-5 years
- >5 years

Section B: Variable information

Monitoring and Evaluation Practices

Please select your appropriate opinion for each question using the following scales:

1=Strongly disagree, 2=Disagree, 3=Neutral, 4=Agree and 5=Strongly agree.

NO	**Planning Process**	**1**	**2**	**3**	**4**	**5**
1	During project planning, set aside money for monitoring and evaluation.					
2	The M&E planning process is included in the project plans.					
3	The planning process is utilized and is well-detailed.					
4	The planning process aids in determining the cost of the M&E resource requirements.					
5	M&E activities schedule clearly presented in the plan					
6	At the planning of the project, M&E staff roles and duties were established.					

7	The project is able to create a management system to keep it on track.					
Technical Expertise						
8	The project team receives training to provide them with the technical know-how needed to complete M&E					
9	The project selects qualified individuals to perform the M&E tasks.					
10	To make sure the appropriate skills are gained to manage the M&E activities, a training requirement analysis is performed for the project.					
11	There is sufficient budget allocated for staff training and development					
12	Team training have had an impact on this project Monitoring and Evaluation					
13	The M&E department in your company is strategically situated and has the necessary resources.					

7. Does the company's M&E system for projects have a good level of organization?

- Yes
- No

8. Does your company have a formal M&E plan, guideline, or framework?

- Yes
- No

9. How often the projects monitored?

- Weekly
- Monthly
- Quarterly
- Bi-annually
- Annually
- Never Monitored

10. What type of project monitoring methodology does the company employ?

- Process monitoring

- Technical monitoring
- Financial monitoring
- Quality monitoring
- Other (please specify below) ----------

- Never Monitored

11. Kindly indicate the extent to which you agree with each statement.

Use a scale of 1-5 where 1 strongly disagrees, 2 disagrees, 3 is Neutral, 4 agrees, and 5 strongly agree.

Please tick on that best represents your level of Agreement.

#	Statement	1	2	3	4	5
I.	The monitoring method used effectively gathers relevant information.					
II.	The project's difficulties or issues are efficiently identified by the monitoring technique.					
III.	The monitoring method offers real-time data or updates on project progress.					
IV.	The inputs gained through the monitoring technique were important for directing decision-making processes.					
V.	The monitoring technique serves in measuring and tracking Project performance in general.					

12. What type of evaluation does the company employ to measure the effectiveness of the project?

- Process evaluation
- Impact evaluation
- Outcome evaluation
- Summative evaluation
- Never evaluated

13. What type of M&E tools, processes, or methods does the company employ?

- Performance indicators
- Logical framework approach
- Theory-based evaluation

- Formal surveys

14. Assess the contribution of M&E tools for project success.

Please select your appropriate opinion for each question using the following scales:

1=Strongly disagree, 2=Disagree, 3=Neutral, 4=Agree and 5=Strongly agree

NO	**Statement**	**1**	**2**	**3**	**4**	**5**
1	The M&E tools used in the project significantly contribute to its overall success.					
2	The M&E tools provide accurate and reliable data for tracking project progress and outcomes.					
3	The M&E tools help identify areas of improvement and strategic adjustments needed for project success					
4	The M&E tools effectively measure the achievement of project objectives and targets.					
5	The M&E tools provide valuable insights for continuous improvement in project activities.					
6	The M&E tools are an essential component of project planning and implementation for success.					
7	The chances of a project's success are increased by the presence of an effective M&E framework.					
8	The tools for monitoring and evaluating the project's progress were successful.					
9	Findings from the project's monitoring and evaluation have been used to guide learning and decision-making.					
10	The monitoring and evaluation framework for the project enables ongoing improvement of project results and impacts.					

15. What are the basic elements of the project M&E plan?

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16. What are the major factors among the identified elements which affect the project M&E effectiveness of the ethio telecom cloud computing project?

Section C: This interview questions will be answered by purposively selected respondents

1. What were the basic elements of the project M&E and which were having significant impacts on the efficiency of project M&E practices at ethio telecom?
2. Are project monitoring and evaluation performed in your organization?
3. Who is responsible for project monitoring and evaluation?
4. Are the monitoring and evaluation practices of the firm effective? Why or why not