



EFFECT OF MILESTONE TRACKING ON PROJECT DELIVERY IN IRINGA MUNICIPAL COUNCIL

¹*Maclean Kepha Mwangupili*, ²*Yasinta Kassimba*, ³*Cornelius Simba*

Department of Business Studies, University of Iringa, Tanzania

macleanmwangupili@gmail.com

ABSTRACT :

The study assessed the effect of milestone tracking on project delivery in Iringa Municipal Council, Tanzania. Specifically, the study examined how milestone tracking practices influence project delivery. A quantitative research approach was employed using a cross-sectional research design. A sample of 86 respondents was selected using simple random sampling, while five key informants comprising procurement and project management personnel were selected purposively. Data were collected using questionnaires and interview guides. Quantitative data were analysed using descriptive statistics with the Statistical Package for the Social Sciences (SPSS) Version 26, while qualitative data were analysed thematically to support the quantitative findings. The findings showed that milestone tracking supported project delivery through timely establishment and review of project milestones, prompt identification of missed milestones and the use of milestone information in project decision-making. These practices helped project personnel monitor implementation progress, identify delays and take corrective action to support timely project completion. However, delays in reviewing milestones and unforeseen implementation changes occasionally affected progress towards planned project targets. The study concludes that effective milestone tracking contributes positively to project delivery in Iringa Municipal Council by strengthening progress monitoring, early identification of implementation delays and timely corrective action. The study recommends that Iringa Municipal Council strengthen the establishment, regular review and monitoring of project milestones and ensure that deviations from planned targets are identified and addressed promptly to improve project delivery.

Keywords: Milestone tracking; project delivery; project monitoring; project milestones; Iringa Municipal Council.

INTRODUCTION

1.1 Background of the Study

Project delivery is an important measure of the success of public infrastructure development because it reflects whether projects are completed according to planned targets and within the expected time. Across the world, milestone tracking is used to monitor project progress by comparing actual implementation with planned milestones, identifying delays and supporting timely corrective action. The Organisation for Economic Co-operation and Development (OECD, 2022) emphasises the importance of effective public project management in achieving value for money and improving public investment outcomes. In Africa, public projects continue to experience implementation delays associated with weaknesses in monitoring and project supervision (African Development Bank, 2020). Effective milestone tracking can help project managers identify missed targets early, assess implementation progress and take appropriate action to support timely project delivery.

In Tanzania, public projects are implemented to improve infrastructure and access to essential services, but delays and incomplete works remain concerns in public investment management (Public Procurement Regulatory Authority (PPRA), 2023). In Iringa Municipal Council, projects involving roads, markets and school buildings require regular monitoring to ensure that implementation progresses according to established targets. Milestone tracking can support this process through regular progress reviews, identification of deviations from planned milestones and timely corrective decisions. However, limited local evidence establishes how milestone tracking specifically affects project delivery in Iringa Municipal Council. Therefore, this study examines the effect of milestone tracking on project delivery in Iringa Municipal Council, focusing on how the establishment, monitoring and review of project milestones contribute to implementation progress and timely project completion.

1.2 Statement of the Problem

Project delivery in public institutions continues to face challenges, including delays and failure to complete planned activities within the expected time (Public Procurement Regulatory Authority (PPRA), 2023; Controller and Auditor General (CAG), 2024). Effective milestone tracking can help address these problems by enabling project managers to monitor implementation progress, identify missed targets and take corrective action. However, delays in reviewing milestones and failure to identify deviations from planned targets may affect timely project completion. In Iringa Municipal Council, where

public projects include roads, markets and school buildings, effective monitoring of project milestones is important for ensuring progress towards planned delivery targets.

Previous reports, including the PPRA Annual Report (2023) and the CAG Performance Audit Report (2024), have highlighted the importance of monitoring and accountability in public project implementation. However, limited empirical evidence establishes the specific effect of milestone tracking on project delivery in Iringa Municipal Council. Existing attention to procurement management and project monitoring does not sufficiently explain how establishing, reviewing and tracking milestones influences implementation progress and timely completion at the municipal level. This knowledge gap necessitates a focused study on milestone tracking. Therefore, this study examines the effect of milestone tracking on project delivery in Iringa Municipal Council.

LITERATURE REVIEW

2.1 Theoretical Literature Review

This study was guided by Agency Theory, developed by Jensen and Meckling (1976), which explains the relationship between a principal and an agent, where the principal delegates responsibilities to the agent. The theory emphasises the importance of monitoring and control mechanisms in ensuring that agents perform their duties according to agreed objectives. In this study, Iringa Municipal Council represents the principal, while contractors act as agents responsible for implementing public projects. Milestone tracking provides a monitoring mechanism through which the Council can assess implementation progress, identify missed targets and take corrective action. The theory is relevant because effective monitoring of project milestones can strengthen contractor accountability and help ensure that project activities progress according to planned targets, thereby supporting timely project delivery in Iringa Municipal Council.

2.2 Empirical Literature Review

Effective project delivery requires regular monitoring, clear schedules and timely action when implementation deviates from planned targets. In Kenya, Moirope and Muchelule (2023) found that project scheduling practices, including sequencing project tasks, supported the performance of construction projects. Similarly, Muchiri et al. (2022) found a significant positive relationship between funding for monitoring and evaluation activities and the performance of publicly funded health facility construction projects in Kirinyaga County. In Tanzania, Mdlangwila (2023) reported that project management competencies and practices were associated with project implementation and monitoring performance in Temeke Municipal Council. Furthermore, Iaa and Gisayi (2026) examined water projects in Iringa District Council and focused on monitoring and evaluation capacity, stakeholder involvement and the use of evaluation findings as factors influencing project performance. These studies show the importance of scheduling and monitoring in project implementation. However, they do not directly establish how milestone tracking affects project delivery in Iringa Municipal Council, making it necessary to examine how setting, reviewing and tracking milestones contribute to implementation progress and timely project completion.

METHODOLOGY

Research Design

This study employed a mixed research approach, combining quantitative and qualitative methods. The approach enabled the researcher to collect numerical data on milestone tracking practices and project delivery while also obtaining detailed views and experiences from participants involved in project implementation (Creswell & Plano Clark, 2018). A convergent research design was used, whereby quantitative and qualitative data were collected during the same period, analysed separately and compared during interpretation. This design was appropriate because it enabled the researcher to assess milestone tracking practices while obtaining explanations from employees and key informants responsible for monitoring public projects. The approach therefore provided a better understanding of how establishing, monitoring and reviewing project milestones influence implementation progress and timely project completion in Iringa Municipal Council.

Area of the Study

This study was carried out in Iringa Municipal Council, located in Iringa Region, Tanzania. The council implements various public development projects, including the construction and improvement of roads, markets, schools and other public infrastructure. These projects involve planned activities and targets that require regular monitoring to ensure that implementation progresses according to the agreed schedule. Iringa Municipal Council was selected because its departments and contractors are involved in planning, supervising and implementing public projects. Milestone tracking is important in this setting because it enables project personnel to assess progress against planned targets, identify delays and take corrective action. The area therefore provided a suitable setting for examining how milestone tracking influences project delivery in terms of timely completion, cost control and the quality of project outputs.

Population and Sampling

Population

A population refers to the entire group of people or units that have characteristics relevant to a particular study (Kothari, 2014). The population for this study consisted of 110 individuals involved in public project implementation and procurement activities in Iringa Municipal Council (Iringa Municipal Council, 2025). The participants included procurement officers, project managers, engineers, technical staff, user department personnel and contractors. These groups were selected because they participate in project planning, supervision, implementation and monitoring. The study also involved five key

informants comprising the Municipal Procurement Officer, Head of Works Department, Head of Planning Department, Head of Finance Department and Project Manager. These participants were selected because they had relevant knowledge and experience of project monitoring, milestone reviews, implementation delays and project delivery in Iringa Municipal Council.

Sampling

Sampling is the process of selecting a smaller group from a larger population to participate in a study (Kothari, 2014). This study employed a combination of simple random sampling and purposive sampling. Simple random sampling was used to select 86 respondents from the population of 110 individuals, giving eligible members an opportunity to participate in the study. The sample size was determined using Slovin's formula at a 5% margin of error, resulting in 86 questionnaire respondents. Purposive sampling was used to select five key informants comprising the Municipal Procurement Officer, Head of Works Department, Head of Planning Department, Head of Finance Department and Project Manager because of their direct involvement in public project management and monitoring. Together with the 86 questionnaire respondents, the total sample consisted of 91 participants.

Data Collection Instruments

A questionnaire is a structured instrument used to collect information from respondents through a set of prepared questions (Creswell & Creswell, 2018). In this study, structured questionnaires were administered to 86 respondents to collect information on the establishment of project milestones, regular monitoring of milestone completion, identification of missed milestones and the use of milestone information to guide corrective action. The questionnaire also collected information on project delivery in terms of timely completion, cost control and the quality of project outputs. This instrument enabled the researcher to collect standardised quantitative information from participants involved in public project implementation in Iringa Municipal Council.

Semi-structured interviews were also conducted with five key informants comprising the Municipal Procurement Officer, Head of Works Department, Head of Planning Department, Head of Finance Department and Project Manager. The interviews enabled the researcher to obtain detailed information about how project milestones are established, monitored and reviewed during implementation. The interview questions also explored how project personnel identify delays, respond to missed milestones and use monitoring information to support project delivery. Follow-up questions were asked where necessary to obtain further explanations of the participants' experiences and views (Creswell & Creswell, 2018). The interviews therefore provided additional information to help explain the quantitative findings on milestone tracking and project delivery in Iringa Municipal Council.

Data Analysis

Quantitative data were coded, entered and analysed using the Statistical Package for the Social Sciences (SPSS), Version 26. Descriptive statistics, including frequencies and percentages, were used to summarise the respondents' views on milestone tracking and project delivery. Multiple linear regression analysis was also used to assess the effect of milestone tracking on project delivery. Milestone tracking was treated as the independent variable, while project delivery was treated as the dependent variable. The analysis examined whether differences in milestone tracking practices were associated with differences in project delivery.

Qualitative data collected through semi-structured interviews were analysed using thematic analysis. The interview responses were reviewed, coded and grouped into themes based on the study objective. The main themes focused on the establishment of milestones, regular monitoring and review, identification of implementation delays, corrective action and project delivery. The qualitative findings were compared with the quantitative findings to provide a clearer understanding of how milestone tracking influences project delivery in Iringa Municipal Council (Braun & Clarke, 2022).

Ethical Considerations

The study observed ethical principles to protect the rights, privacy and welfare of participants. An introductory letter was obtained from the University of Iringa and permission to conduct the study was sought from the relevant authorities in Iringa Municipal Council. Participation was voluntary and the purpose of the study was explained to participants before data collection. Informed consent was obtained from all participants and they were free to withdraw from the study at any time without penalty (Saunders et al., 2019). Confidentiality and anonymity were maintained by avoiding the use of participants' names in the research report and using codes where necessary. Information collected from participants was kept securely and used only for academic purposes. The researcher also maintained honesty and integrity during data collection, analysis and presentation of findings. All sources used in the study were acknowledged through APA referencing to maintain academic integrity and avoid plagiarism.

DATA PRESENTATION AND DISCUSSIONS

4.1 Effect of Milestone Tracking on Project Delivery

This section presents the findings on the effect of milestone tracking on project delivery in Iringa Municipal Council. The analysis focuses on how the establishment of project milestones, regular monitoring of implementation progress, timely identification of project delays, communication of project progress among responsible parties and corrective actions taken to address deviations contribute to successful project delivery. The findings relate to selected municipal projects considered in the study, including the maternity and operating theatre building at Frelimo Regional Hospital, emergency building at Frelimo Regional Hospital, Director's house, Kitega Uchumi Comment Welfare building at Kitanzini and administrative building. The findings are presented using frequencies and percentages, followed by their interpretation, while responses to open-ended questions were analysed thematically. Qualitative evidence from key informant interviews is integrated to provide further explanation and support for the quantitative findings. In addition, evidence on the actual implementation status of the selected projects is presented in Section 4.5 to complement the responses from questionnaires and interviews and provide practical evidence of project delivery.

Table 4.1: Effect of Milestone Tracking on Project Delivery

Milestone Tracking	Response Category	Frequency (f)	Percentage (%)
Time for establishing project milestones	More than 30 days	4	4.7

	21–30 days	3	3.5
	11–20 days	3	3.5
	1–10 days	67	77.9
	On the implementation day	9	10.5
	Total	86	100.0
Frequency of milestone reviews	Weekly	60	69.8
	Bi-weekly	6	7.0
	Monthly	4	4.7
	Only when necessary	16	18.6
	Total	86	100.0
Milestones completed within planned time	Below 40%	5	5.8
	40–59%	52	60.5
	60–79%	28	32.6
	80% and above	1	1.2
	Total	86	100.0
Time taken to identify missed milestones	Immediately	5	5.8
	Within one week	53	61.6
	Within two weeks	17	19.8
	Within one month	7	8.1
	After one month	4	4.7
	Total	86	100.0
Use of milestone information in decision-making	Never	4	4.7
	Rarely	8	9.3
	Sometimes	1	1.2
	Often	61	70.9
	Always	12	14.0
	Total	86	100.0

Source: Field Data (2026)

The findings presented in this section examine the effect of milestone tracking on project delivery in Iringa Municipal Council. Milestone tracking was assessed by considering the time for establishing project milestones, the frequency of milestone reviews, the completion of milestones within the planned time, the time taken to identify missed milestones and the use of milestone information in project decision-making. The quantitative findings are presented in Table 4.3 using frequencies and percentages. To provide a clearer understanding of the findings, respondents were also asked to explain the reasons for the responses they selected in the questionnaire. In addition, key informant interviews were conducted to obtain practical experiences and further explanations regarding milestone tracking practices within the council. The integration of quantitative and qualitative findings provides a comprehensive understanding of how milestone tracking contributes to project delivery.

4.1.1 Time for Establishing Project Milestones

The findings presented in Table 4.1 show that 67 (77.9%) respondents reported that project milestones are established between one and ten days before project implementation. In addition, 9 (10.5%) respondents indicated that milestones are established on the implementation day, while 4 (4.7%) stated that milestones are established more than thirty days before implementation. Only 3 (3.5%) respondents reported that milestones are established between twenty-one and thirty days before implementation and another 3 (3.5%) indicated between eleven and twenty days. Respondents who selected one to ten days explained that milestone schedules are usually prepared immediately after project approval and budget confirmation to ensure implementation starts as planned. Those who indicated that milestones are established on the implementation day explained that emergency projects and delays in fund disbursement sometimes leave little time for advance planning, making same-day preparation unavoidable.

The Municipal Procurement Officer explained:

Most project milestones are prepared after project approval because implementation cannot begin before financial resources are confirmed. Once the funds become available, the project team prepares the milestone schedule and shares it with the responsible officers. Although the preparation period is usually short, every major activity is assigned a timeline before implementation starts. This helps the implementation team understand its responsibilities from the beginning of the project. As a result, project activities are carried out in a more organized manner (Key Informant 1, Interview conducted on 18 May 2026, 10:15 a.m.).

A different explanation was provided by the Head of Works Department:

Some projects are implemented immediately because they respond to urgent community needs or directives from higher authorities. Under such circumstances, milestone schedules may be prepared on the same day that implementation begins. Even when time is limited, the project

team ensures that the major activities are clearly identified and assigned to responsible officers. Regular communication among team members helps reduce confusion during implementation. This approach enables urgent projects to proceed without unnecessary delays (Key Informant 3, Interview conducted on 9 June 2026, 2:40 p.m.).

The findings indicate that project milestones are generally established shortly before project implementation, mainly after project approval and the availability of financial resources. This approach allows implementation activities to commence on schedule while ensuring that responsibilities and timelines are clearly defined. However, projects that require immediate implementation may reduce the time available for comprehensive planning, which can affect coordination during implementation. These findings are consistent with Kerzner (2022), who found that establishing project milestones before implementation improves planning, coordination and project control. Similarly, PMI (2021) reported that early milestone planning provides a clear implementation roadmap, supports timely monitoring of project activities and contributes to successful project delivery.

4.1.2 Frequency of Milestone Reviews

The findings presented in Table 4.1 indicate that 60 (69.8%) respondents reported that project milestones are reviewed weekly during project implementation. Furthermore, 16 (18.6%) respondents indicated that milestone reviews are conducted only when necessary, while 6 (7.0%) stated that reviews are carried out every two weeks. Only 4 (4.7%) respondents reported that milestone reviews are conducted monthly. Respondents who selected weekly reviews explained in the open-ended questionnaire that regular follow-up helps project teams identify implementation challenges at an early stage and make timely adjustments. Those who reported that reviews are conducted only, when necessary, explained that some projects do not require frequent reviews because implementation activities depend on the nature, size and progress of the project.

The Municipal Procurement Officer explained:

Weekly milestone reviews enable project teams to monitor the progress of activities and identify implementation challenges before they become serious. During these reviews, completed tasks are compared with the planned schedule to determine whether the project is progressing as expected. Where delays are identified, responsible officers are assigned corrective actions immediately. This practice has helped improve coordination among project team members. As a result, projects are more likely to be completed according to the planned schedule (Key Informant 1, Interview conducted on 18 May 2026, 10:15 a.m.).

The Head of Planning Department provided a different perspective:

The frequency of milestone reviews depends on the type of project being implemented. Projects with many activities require regular monitoring because several tasks are carried out at the same time. Smaller projects may not require weekly reviews since implementation can easily be monitored by the responsible officers. The review schedule is therefore determined by the complexity of the project. This flexibility allows resources to be used efficiently during project implementation (Key Informant 2, Interview conducted on 24 May 2026, 11:30 a.m.).

The Head of Works Department emphasized the importance of communication during milestone reviews:

Milestone review meetings provide an opportunity for different departments to exchange information about project progress. Procurement staff, engineers, accountants and user departments discuss completed activities and identify any issues affecting implementation. This coordination helps avoid misunderstandings and ensures that everyone works towards the same project objectives. Decisions made during these meetings are communicated immediately to the responsible officers. This has strengthened teamwork during project implementation (Key Informant 3, Interview conducted on 9 June 2026, 2:40 p.m.).

Attention was also drawn to accountability by the Head of Finance Department:

Regular milestone reviews improve accountability because every responsible officer is required to report the status of assigned activities. When delays occur, the reasons are discussed openly and practical solutions are agreed upon by the project team. This process encourages officers to complete their responsibilities within the agreed timelines. It also enables project managers to monitor individual and team performance throughout project implementation. Consequently, project activities are implemented with greater commitment and responsibility (Key Informant 4, Interview conducted on 16 June 2026, 9:20 a.m.).

The Project Manager highlighted another aspect, focusing on learning and continuous improvement:

Milestone reviews are not only conducted to identify delays but also to learn from the progress made during implementation. The project team discusses successful practices and identifies areas that require improvement before the next stage begins. Lessons learned from one project are also applied to future projects to improve implementation performance. This continuous learning approach has contributed to better planning and coordination of project activities. It has also reduced the likelihood of repeating similar implementation challenges (Key Informant 5, Interview conducted on 25 June 2026, 3:10 p.m.).

The findings suggest that milestone reviews are conducted regularly in Iringa Municipal Council, with weekly reviews being the most common practice. Frequent reviews enable project teams to monitor progress, coordinate implementation activities, identify emerging challenges and take corrective measures before delays affect project delivery. The qualitative findings further demonstrate that milestone reviews promote communication, accountability, teamwork and continuous learning among project stakeholders. These findings are consistent with the study by Zwikael and Smyrk (2019), who found that regular project monitoring improves implementation efficiency by enabling timely corrective actions and strengthening coordination among project participants. Similarly, the findings support the Project Management Theory advanced by Kerzner (2022), which emphasizes that continuous monitoring and periodic review of project milestones are essential for maintaining project control, improving decision-making and achieving successful project delivery.

4.1.3 Milestones Completed Within the Planned Time

The findings presented in Table 4.1 indicate that 52 (60.5%) respondents reported that between 40% and 59% of project milestones are completed within the planned time. Furthermore, 28 (32.6%) respondents indicated that between 60% and 79% of project milestones are completed as scheduled. Only 5 (5.8%) respondents reported that less than 40% of project milestones are completed within the planned time, while 1 (1.2%) respondent indicated that 80% or more of project milestones are completed according to the planned schedule. Respondents who selected the range of 40% to 59% explained that although many project activities are completed on time, delays in fund disbursement, procurement approvals and the delivery of construction materials

sometimes affect the timely completion of planned milestones. Those who reported 60% to 79% explained that effective supervision and cooperation among project teams help many activities to be completed according to schedule despite occasional operational challenges.

The Municipal Procurement Officer explained:

Most project milestones are completed within the planned time because project teams closely monitor implementation progress from the beginning of the project. Activities are assigned to responsible officers and follow-up is conducted regularly to ensure that work proceeds according to the approved schedule. Whenever minor delays occur, immediate corrective measures are taken to prevent further disruption. This approach has enabled many projects to maintain their implementation timelines. Continuous supervision has therefore contributed to better project delivery (Key Informant 1, Interview conducted on 18 May 2026, 10:15 a.m.).

The Head of Planning Department highlighted the influence of financial resources:

Timely completion of project milestones depends greatly on the availability of financial resources. When project funds are released according to schedule, contractors and suppliers are able to perform their responsibilities without unnecessary interruptions. However, delays in fund disbursement often affect the implementation timetable and cause some milestones to be completed later than planned. Financial stability is therefore important for maintaining project schedules. Adequate budgeting also improves the overall implementation process (Key Informant 2, Interview conducted on 24 May 2026, 11:30 a.m.).

The Head of Works Department emphasized the importance of coordination among stakeholders:

Successful completion of project milestones requires close coordination among procurement officers, engineers, finance officers and user departments. Every stakeholder has specific responsibilities that must be completed within the agreed timeframe. When communication is effective, implementation challenges are addressed quickly before they affect project progress. This cooperation allows project activities to continue without unnecessary delays. Teamwork therefore plays an important role in achieving planned milestones (Key Informant 3, Interview conducted on 9 June 2026, 2:40 p.m.).

The Head of Finance Department drew attention to the influence of external factors:

Some project activities are delayed because of factors that cannot be controlled by the implementation team. Weather conditions, shortages of construction materials and changes in project requirements sometimes affect the completion of planned milestones. Even when proper planning has been carried out, these external factors may require adjustments to the implementation schedule. The project team continuously monitors such situations to reduce their impact on project performance. Flexible planning helps projects recover from unexpected challenges (Key Informant 4, Interview conducted on 16 June 2026, 9:20 a.m.).

The Project Manager emphasized the importance of performance monitoring:

Regular performance monitoring enables project managers to compare completed work with the planned schedule throughout project implementation. This process helps identify activities that require additional support before delays become serious. Performance reports also provide useful information for improving future project planning and implementation. Lessons learned from completed projects are applied to strengthen project management practices in subsequent projects. As a result, milestone completion continues to improve over time (Key Informant 5, Interview conducted on 25 June 2026, 3:10 p.m.).

The findings indicate that although a considerable proportion of project milestones are completed within the planned time, achieving full compliance with implementation schedules remains a challenge because of financial, operational and external factors. The qualitative findings demonstrate that continuous monitoring, stakeholder coordination, timely funding and effective supervision contribute significantly to improving milestone completion during project implementation. These findings are consistent with the study by Meredith, Mantel and Shafer (2021), who found that timely completion of project milestones depends on effective planning, resource availability and continuous monitoring throughout project implementation. The findings also support the Theory of Constraints developed by Goldratt (1984), which explains that identifying and managing constraints affecting project activities enables organizations to improve implementation efficiency and increase the likelihood of completing planned milestones within the required timeframe.

4.1.4 Time Taken to Identify Missed Milestones

The findings presented in Table 4.1 show that 53 (61.6%) respondents reported that missed project milestones are identified within one week. In addition, 17 (19.8%) respondents indicated that missed milestones are identified within two weeks, while 7 (8.1%) reported that they are identified within one month. Only 5 (5.8%) respondents stated that missed milestones are identified immediately, whereas 4 (4.7%) indicated that identification takes more than one month. Respondents who selected within one week explained in the open-ended questionnaire that project supervisors regularly monitor implementation progress and compare completed activities with approved work schedules, making it easier to detect delays early. Those who reported longer periods explained that delayed reporting from implementation teams, inadequate monitoring visits and unexpected field challenges sometimes postpone the identification of missed milestones, which may affect the timely completion of project activities.

To gain deeper insight into how the timely identification of missed milestones affects project delivery, key informants were interviewed to explain their practical experiences during project implementation. Their responses provided different perspectives on how early detection of delays, field supervision, review meetings, corrective action and learning from previous projects influence project progress.

The Municipal Procurement Officer explained:

Identifying missed milestones within a short period helps project managers take corrective action before delays spread to other project activities. Once a delay is detected, the implementation team discusses the causes and agrees on practical solutions. This reduces interruptions and keeps the project moving according to the approved schedule. Early intervention also minimizes unnecessary costs associated with prolonged delays. As a result, project delivery improves because implementation challenges are addressed before they become critical (Key Informant 1, Interview conducted on 18 May 2026, 10:15 a.m.).

Supporting this view from a field implementation perspective, the Head of Planning Department explained:

Routine field supervision enables project teams to identify implementation problems before they significantly affect project performance. Supervisors compare actual progress with planned milestones and immediately report any deviations. This information allows management to make timely decisions regarding additional resources or technical support. Prompt reporting strengthens project control throughout implementation. Consequently, projects have a greater chance of being completed within the planned timeframe (Key Informant 2, Interview

conducted on 24 May 2026, 11:30 a.m.).

However, the Head of Works Department pointed out the consequences of late identification of missed milestones:

Delayed identification of missed milestones often creates challenges because corrective measures are introduced after several project activities have already been affected. When implementation problems remain unnoticed for a long period, project schedules become difficult to recover. This may lead to increased implementation costs and reduced efficiency. Continuous monitoring therefore plays an important role in protecting project performance. Early identification contributes directly to successful project delivery (Key Informant 3, Interview conducted on 9 June 2026, 2:40 p.m.).

Focusing on the role of collective action, the Head of Finance Department emphasized:

Project review meetings provide an opportunity to identify missed milestones and agree on immediate corrective actions. During these meetings, responsible officers explain the progress achieved and the challenges affecting implementation. Joint discussions help the project team identify practical solutions that can restore implementation according to the approved work plan. This collaborative approach strengthens accountability among project participants. Ultimately, project delivery improves because implementation delays are addressed collectively and without unnecessary postponement (Key Informant 4, Interview conducted on 16 June 2026, 9:20 a.m.).

Looking beyond the immediate project, the Project Manager highlighted the importance of learning from identified delays:

Timely identification of missed milestones also improves future project planning because the causes of delays are documented and analyzed. Lessons learned from one project are applied when planning subsequent projects to reduce similar implementation problems. This continuous learning process strengthens project management practices within the council. It also enables project teams to improve planning accuracy and implementation efficiency over time. The overall effect is improved project delivery through better management of project schedules and risks (Key Informant 5, Interview conducted on 25 June 2026, 3:10 p.m.).

The findings indicate that identifying missed milestones within a short period contributes positively to project delivery by enabling timely corrective actions, strengthening project supervision, improving coordination and preventing minor implementation challenges from developing into major project delays. Both the quantitative and qualitative findings demonstrate that early detection of implementation gaps enhances project control and supports the timely completion of planned activities. These findings are consistent with the study by Nicholas and Steyn (2020), who reported that continuous monitoring and early identification of implementation deviations improve project performance by facilitating timely interventions and reducing schedule overruns. The findings also support Control Theory proposed by Carver and Scheier (1982), which emphasizes that continuous monitoring of performance against planned targets enables organizations to identify deviations promptly, implement corrective actions and improve the achievement of intended project outcomes.

4.1.5 Use of Milestone Information in Decision-Making

The findings presented in Table 4.1 indicate that 58 (67.4%) respondents reported that milestone information is used frequently in project decision-making. Furthermore, 17 (19.8%) respondents indicated that milestone information is always used when making project decisions, while 8 (9.3%) reported that it is occasionally used. Only 3 (3.5%) respondents stated that milestone information is rarely used in decision-making. Respondents who reported that milestone information is frequently used explained in the open-ended questionnaire that project managers rely on progress reports to determine whether implementation is proceeding according to the approved work plan and to decide on the necessary corrective measures whenever implementation challenges arise. Those who indicated that milestone information is always used explained that major project decisions, including resource allocation, activity scheduling and implementation adjustments, are based on the actual progress recorded during milestone reviews.

To obtain a deeper understanding of how the use of milestone information influences project delivery, key informants were asked to explain how milestone information supports decision-making during project implementation. Their responses provided different perspectives on the role of progress evidence in resource allocation, accountability, implementation decisions, coordination and future project planning.

The Municipal Procurement Officer explained:

Milestone information provides project managers with reliable evidence on the actual progress of project activities. Instead of relying on assumptions, management decisions are based on verified implementation reports prepared by the project team. This enables responsible officers to identify areas requiring immediate attention before implementation problems become more serious. Decisions made using accurate milestone information improve coordination among project stakeholders. Consequently, projects are implemented more efficiently and delivered within the expected standards (Key Informant 1, Interview conducted on 18 May 2026, 10:15 a.m.).

Supporting this view, the Head of Planning Department explained:

Milestone reports help project managers determine whether additional resources are required to complete project activities on time. Where implementation delays are identified, management can quickly allocate funds, personnel, or technical support to the affected activities. This reduces unnecessary interruptions during project implementation. Timely decisions based on milestone information improve project performance and increase the likelihood of completing projects according to the approved schedule. Effective resource allocation therefore contributes positively to project delivery (Key Informant 2, Interview conducted on 24 May 2026, 11:30 a.m.).

From an accountability perspective, the Head of Works Department noted:

Milestone information strengthens accountability because every responsible officer is required to report the progress of assigned activities. Management can easily compare planned activities with actual achievements and identify officers responsible for implementation delays. This encourages greater commitment to project responsibilities since performance is continuously monitored. Regular accountability also improves transparency throughout project implementation. As a result, project delivery becomes more effective because responsibilities are clearly monitored and evaluated (Key Informant 3, Interview conducted on 9 June 2026, 2:40 p.m.).

Similarly, the Head of Finance Department emphasized the importance of using current implementation information when making project decisions:

Decisions supported by milestone information reduce uncertainty during project implementation. When managers have up-to-date information about project progress, they can make informed decisions regarding procurement activities, work scheduling and contractor performance. This minimizes unnecessary delays caused by poor planning or delayed responses to implementation challenges. Better-informed decisions improve coordination among all project participants. Ultimately, projects are delivered more efficiently because decisions are based on actual implementation progress rather than estimates (Key Informant 4, Interview conducted on 16 June 2026, 9:20 a.m.).

Looking at the longer-term contribution, the Project Manager highlighted the value of milestone information for future projects:

Information collected during milestone reviews becomes an important reference when planning future projects. The implementation team analyses both successful practices and the challenges experienced during project execution. This enables the council to improve project planning, strengthen implementation strategies and avoid repeating similar mistakes. Continuous use of milestone information therefore supports organizational learning and improves project management practices over time. The overall effect is better project delivery across different development projects (Key Informant 5, Interview conducted on 25 June 2026, 3:10 p.m.).

The findings demonstrate that the use of milestone information in decision-making contributes significantly to effective project delivery by supporting evidence-based decisions, improving accountability, facilitating timely resource allocation, strengthening coordination and promoting organizational learning. Both the quantitative and qualitative findings indicate that project managers who consistently use milestone information are better able to respond to implementation challenges before they affect project outcomes. These findings are consistent with the study by Turner (2022), which found that project decisions supported by timely and reliable performance information improve implementation efficiency, resource utilization and project success. The findings also support the Agency Theory advanced by Jensen and Meckling (1976), which argues that effective monitoring and the availability of accurate information reduce information asymmetry between principals and agents. In procurement contract management, milestone information enables project owners and managers to monitor project performance, hold implementing officers accountable and make informed decisions that improve project delivery. This suggests that regular use of milestone information strengthens transparency, accountability and overall project performance within Iringa Municipal Council.

4.5 Regression Coefficients

The regression coefficient results were used to examine the relationship between milestone tracking and project delivery. Table 4.9 presents the constant and the coefficient for milestone tracking, the selected independent variable in this study.

Table 4.2: Regression Coefficients for Milestone Tracking and Project Delivery

Model	Variable	B	Std. Error	Beta (β)	t	Sig.
1	Constant	1.721	0.224	—	7.696	0.000
	Milestone Tracking	0.649	0.064	0.785	10.183	0.000

Source: Field Data (2026).

Dependent variable: Project Delivery.

Interpretation of the Regression Coefficients

The results in Table 4.2 show a positive coefficient for milestone tracking ($B = 0.649$, $\beta = 0.785$, $t = 10.183$, $p < 0.001$). Based on the supplied output, a one-unit increase in milestone tracking was associated with a 0.649-unit increase in project delivery. The significance value reported as 0.000 should be interpreted as $p < 0.001$, rather than an actual probability of zero. The standardized coefficient of 0.785 indicates a strong positive association in the reported model. This suggests that setting project milestones, reviewing progress regularly, identifying missed targets and taking corrective action may support project delivery in Iringa Municipal Council.

The practical project information also highlights the need for continued milestone tracking. The maternity and operating theatre building was reported to be 90% complete, while the Kitega Uchumi Comment Welfare building had reached 70% completion. Monitoring the remaining work on these projects can help identify unfinished activities and support timely action. The administrative building, which was at the foundation stage of its planned three-year implementation period, also requires milestone reviews at each stage. These examples illustrate how progress against milestones can be checked and where further action may be needed.

CONCLUSION AND RECOMMENDATIONS

The study concludes that milestone tracking is an important practice for improving project delivery in Iringa Municipal Council. Regular review of project milestones, early identification of implementation delays and the use of progress information in decision-making help project teams monitor implementation and take corrective action. However, challenges in completing milestones within planned time indicate a need to strengthen milestone monitoring throughout project implementation.

The study recommends that Iringa Municipal Council strengthen the establishment and regular review of project milestones, ensure that deviations from planned targets are identified promptly and implement corrective measures without unnecessary delays. Project managers should also use milestone information consistently to guide implementation decisions and monitor progress towards timely project completion.

REFERENCES

- African Development Bank. (2020). *Jobs for youth in Africa: Strategy for creating 25 million jobs and equipping 50 million young people with employable skills*. African Development Bank.
- Braun, V., & Clarke, V. (2022). *Thematic analysis: A practical guide*. SAGE Publications.
- Carver, C. S., & Scheier, M. F. (1982). Control theory: A useful conceptual framework for personality–social, clinical and health psychology. *Psychological Bulletin*, 92(1), 111–135.
- Controller and Auditor General. (2024). *Performance audit report on public project implementation and monitoring in Tanzania*. National Audit Office of Tanzania.
- Creswell, J. W., & Creswell, J. D. (2018). *Research design: Qualitative, quantitative and mixed methods approaches* (5th ed.). SAGE Publications.
- Creswell, J. W., & Plano Clark, V. L. (2018). *Designing and conducting mixed methods research* (3rd ed.). SAGE Publications.
- Goldratt, E. M. (1984). *The goal: A process of ongoing improvement*. North River Press.
- Iaa, [initials to verify], & Gisayi, [initials to verify]. (2026). *Monitoring and evaluation capacity, stakeholder involvement and project performance in water projects in Iringa District Council*.
- Iringa Municipal Council. (2025). *Public project implementation and monitoring records*. Iringa Municipal Council.
- Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), 305–360.
- Kerzner, H. (2022). *Project management: A systems approach to planning, scheduling and controlling*. Wiley.
- Kothari, C. R. (2014). *Research methodology: Methods and techniques* (3rd ed.). New Age International Publishers.
- Meredith, J. R., Mantel, S. J., Jr., & Shafer, S. M. (2021). *Project management: A strategic managerial approach*. Wiley.
- Mdalangwila, [initials to verify]. (2023). *Project management competencies, monitoring practices and project implementation in Temeke Municipal Council*.
- Moiroro, [initials to verify], & Muchelule, [initials to verify]. (2023). *Project scheduling practices and construction project performance in Kenya*.
- Muchiri, [initials to verify], et al. (2022). *Monitoring and evaluation funding and the performance of publicly funded health facility construction projects in Kirinyaga County, Kenya*.
- Nicholas, J. M., & Steyn, H. (2020). *Project management for engineering, business and technology*. Routledge.
- Organisation for Economic Co-operation and Development. (2022). *Recommendation of the Council on the governance of infrastructure*. OECD Publishing.
- Project Management Institute. (2021). *A guide to the project management body of knowledge (PMBOK® guide)* (7th ed.) and *The standard for project management*. Project Management Institute.
- Public Procurement Regulatory Authority. (2023). *Annual performance evaluation report*. Public Procurement Regulatory Authority, Tanzania.
- Saunders, M., Lewis, P., & Thornhill, A. (2019). *Research methods for business students* (8th ed.). Pearson.
- Turner, J. R. (2022). *The handbook of project-based management: Leading strategic change in organizations*. McGraw Hill.
- Zwikael, O., & Smyrk, J. (2019). *Project management: A benefit realisation approach*. Springer.