

**INFLUENCE OF INFORMATION TECHNOLOGY TOOLS ON
PERFORMANCE OF JUDICIARY PROJECTS IN NAKURU LAW COURTS,
KENYA**

MZEE KENNEDY OGUMA




**A Research Project Submitted in Partial Fulfilment of the Requirement for the
Award of Master of Science in Project Management and Planning of Mount
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DECLARATION AND APPROVAL

This project is my original work and has not been presented for a degree in any other University or for any other award.


Signature 

Date 6th November 2024

Mzee Kennedy Oguna

MSCPM/2022/51872

I confirm that the work reported in this project was carried out by the candidate under my supervision

Signature 

Date 6th November 2024

Dr. Ruthwinnie Munene

Lecturer, School of Business

Mount Kenya University

DEDICATION

This research Project is dedicated to my daughter, Caroline and my dad, Oguma thank you very much for your moral support.



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I would like to express my deepest gratitude to Dr. Ruthwinnie Munene, my dedicated supervisor, whose guidance, expertise, and unwavering support have been instrumental throughout this research project. I am also immensely grateful to the staff at Mount Kenya University, particularly the library staff, for their invaluable assistance and access to resources that have been critical in the development of this work. Lastly, I extend my heartfelt thanks to Almighty God for providing me with the strength, wisdom, and perseverance to undertake this academic endeavour.



ABSTRACT

The success of project performance relies significantly on the project management approach adopted throughout the planning, implementation, and commissioning phases. Effective project management ensures timely completion, adherence to budget constraints, and delivery of outputs meeting intended utility functions. The integration of Information Communication Technology (ICT) in project management enhances information collection, storage, dissemination, and communication among project participants. This study investigated the impact of information technology tools on project performance, focusing specifically on the operations of the Nakuru Law Courts in Kenya. Despite extensive research on IT utilization across various sectors, there is a notable gap in understanding its role in judiciary project management. This research aimed to address this gap by examining the impact of IT tools on the performance of judiciary projects. The objectives included assessing the impact of electronic communication tools on performance of Judiciary Projects in Kenya, establish the impact of cost tracking tools on performance of Judiciary Projects in Kenya, find out the effect of time tracking tools on performance of Judiciary Projects in Kenya, and to establish the effect of quality assurance tools on performance on project management performance of Judiciary Projects in Kenya. Consequently, this study incorporates three theories: diffusion of innovation theory, systems theory, and the technology acceptance model. Employing a mixed-method approach, the study utilized a descriptive research design to provide a realistic depiction of existing phenomena. Data was collected through questionnaires administered. The target population for the study consisted of 4 judges, 47 directorate staff, 48 Stakeholder groups representing LSK, AG, DPP NGOS and Donors and 10 members from security. The researcher applied both the probability and non-probability sampling techniques to arrive at 55 respondents. Data analysis involved both quantitative and qualitative methods, using SPSS for coding and statistical analysis. The findings were presented in tables, charts and graphs. The study found that electronic communication tools, cost tracking tools, time tracking tools, and quality assurance tools each significantly impact project management performance, with a combined R^2 value of 0.463 indicating that these tools explain 46.3% of the variability in performance. Specifically, electronic communication tools showed a regression coefficient of 0.314, suggesting a notable positive effect on performance. Cost tracking tools had a coefficient of 0.159, indicating their significant but relatively lesser impact. Time tracking tools and quality assurance tools had coefficients of 0.313 and 0.225, respectively, demonstrating their strong influence on timely project completion and quality assurance. Recommendations include investing in advanced features of these tools, integrating them with other project management systems, and implementing comprehensive training programs to maximize their benefits and enhance overall project performance.

LIST OF ACRONYMS/ABBREVIATIONS

DOI : Diffusion of Innovation

DPP : Director of Public Prosecutor

ERP : Enterprise Resource Planning

GIS : Geographic Information System

GOK : Government of Kenya

GPS : Global Positioning System

ICT : Information Communication Technology

LSK : Law Society of Kenya

MIS : Management Information Systems

NGOS : Non-Governmental Organizations

RDTA : Rwanda Transport Development Agency

PMIS : Project Management Information Systems

SMES : Small-To-Medium Enterprises

SPSS : Statistical Package for the Social Sciences

TAM : Technology Acceptance Model

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CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

The project management strategy used during the phases of planning, execution, and commissioning has a major impact on how well the project performs. (Clark,2021). Effective project management ensures desirable outcomes such as timely completion, adherence to budget constraints, and the delivery of outputs meeting intended utility functions. Planning, appraisal, implementation, monitoring, commissioning, termination, and evaluation are critical project management phases that are essential to the success of the project, underscoring the importance for project managers to enhance management strategies for each phase (Clark,2021). Utilizing Information Communication Technology (ICT) in project management is beneficial as it enhances information collection, storage, dissemination, and communication among project participants (Ahmad et al., 2022). ICT encompasses technologies facilitating information handling and communication, including the Internet, computing, and telecommunications (Ahmad et al., 2022). With modern projects becoming increasingly complex and time-driven, there is a growing need for more effective project tools for integration, management, and communication (Gomes et al., 2021). Internet-based Project Management Information Systems emerge as a cost-effective solution offering advantages such as low cost, location-free access, and efficient information sharing among project stakeholders (Gomes et al ,2021).

Globally, throughout the 1980s and 1990s, the failure rate of information systems development projects consistently exceeded 50%, with larger projects being more prone to failure (Aborhor& Baiden 2021). Studies during this period revealed significant wastage of resources, with estimates suggesting that 20% of expenditure in British public sector IS development projects went to waste, while 30% to 40% failed to deliver discernible benefits (Mata, 2023). In the United States, over \$200 billion spent on IS projects in twelve

years yielded few meaningful returns, with only 16% of projects completing on time and within budget (Poveda-Bautista, 2018). Notably, failures in the public sector, such as those in the UK and the US Internal Revenue Service, incurred substantial costs, highlighting the magnitude of the issue (Poveda-Bautista, 2018; Olsen et al., 2020). Morcov et al (2020) found that while projects with budgets under \$750,000 had a 55% success rate, none of those with budgets over \$10 million were successful. In project management, two types of Management Information Systems(MIS) are employed: individual company-developed systems and ASP-based systems, the latter being more versatile but reliant on service provider capability (Olsen et al., 2020).

The integration of Information Technology (IT) tools in project management has revolutionized how projects are planned, executed, and monitored. In the United States, IT tools have significantly enhanced project management across various industries. Organizations leverage sophisticated project management software to streamline processes, ensure efficient resource allocation, and facilitate real-time communication among stakeholders. According to a study by Project Management Institute (PMI, 2021), American companies using advanced project management tools are 60% more likely to meet their project goals, stay within budget, and complete projects on time.

Latin America has been actively engaged in efforts to enhance the effectiveness of its judicial IT systems. Over the past two decades, numerous countries in the region have undertaken initiatives to modernize their judiciaries, with substantial financial investments totaling nearly one billion dollars. According to Willumsen et al., (2019), the World Bank typically focuses on key strategies in judicial performance improvement projects, which include strengthening the independence of the judicial branch and its affiliated entities. These measures are aimed at expediting case processing, improving access to dispute resolution mechanisms, and enhancing the professionalism of legal practitioners.

Recognizing the pivotal role of judicial reform in fostering both democratic governance and economic advancement in Latin America, the World Bank has prioritized such initiatives as part of a broader agenda to align IT systems in developing nations and transitional economies with market-friendly principles. As highlighted by the World Bank (2020), the primary objective of many judicial reform projects supported by the institution worldwide is to bolster a country's economic performance

According to the Standish Group (2020), approximately 24% of global projects experienced premature termination. About 32% of projects were successfully delivered on time, within budget, and met quality standards, while 44% of projects encountered cost overruns and schedule delays, failing to meet their scope and quality requirements. This aligns with the observations of Setiawan et al., (2021), who conducted an analysis of ten surveys in the United Kingdom, revealing a widespread perception of dissatisfaction regarding project success over the past decade and highlighting the need for improved practices to enhance success rates. Shrestha (2021) conducted studies in North America and observed that the potential of project management performance in the region remains largely untapped. He noted that North American news media frequently report on failed projects, citing the launch of the Affordable Care Act (Obamacare) registration website as a notable example, which he described as a disaster.

In Germany, the adoption of IT tools in project management is equally profound, particularly in the manufacturing and engineering sectors. German companies utilize IT tools to integrate complex project tasks, enhance quality control, and ensure compliance with stringent industry standards. The implementation of Industry 4.0 technologies, which includes advanced IT tools for project management, has been pivotal in maintaining Germany's competitive edge in the global market (Muller, 2022). These tools help in

achieving higher efficiency, reducing project lifecycle costs, and improving overall project outcomes.

In Australia, the construction industry has seen substantial benefits from the adoption of IT tools in project management. The use of Building Information Modelling (BIM) and other digital tools has revolutionized project planning and execution. These tools facilitate better collaboration among project teams, improve accuracy in cost estimation, and enhance project delivery timelines (PMI, 2021). Australian companies have reported significant improvements in project outcomes, including reduced costs and enhanced stakeholder satisfaction.

In Korea and Japan, web-based Project Management Information Systems are widely adopted due to their ability to enhance collaboration and communication among project participants, supported by the well-established internet infrastructure and users' familiarity with web-based computing environments (Akbar & Shahid 2023). Additionally, the adoption of Project Management Information Systems by government-affiliated project managers in Korea has facilitated the integration of web-based systems into project management practices (Akbar & Shahid 2023)

In Africa, the pervasive impact of evolving technologies is reshaping societies and fundamentally altering daily activities (Mambwe et al., 2020). At a macro level, Information Technology (IT) drives globalization, while at the enterprise level, it facilitates business process re-engineering and restructuring in response to heightened competition (Hartono et al., 2019). Even within governments, technological innovations are revolutionizing service provision, with computers, fax machines, networks, and other technologies playing integral roles in communication, work, and business (Kim et al. 2019).

Since 1994, Ethiopia's justice system has grappled with several challenges, including a shortage of both human and material resources, as well as a lack of institutional capacity. This has resulted in delays and inefficiencies in law enforcement and judicial administration, exacerbated by discrepancies between existing laws and the provisions outlined in the new constitution. Additionally, obstacles have hindered the promotion of human rights within the country. In response to these issues, the Ministry of Justice in Ethiopia initiated a modest effort in 2001 to support court administration and the legal community. One of the key outcomes of this initiative was the development and implementation of information and communication systems to help disseminate justice within the country (Salman et al, 2021).

Furthermore, projects funded by the Norwegian government aimed to address these challenges by focusing primarily on the training of legal professionals in human rights. These initiatives encompassed various activities such as the training of judges, prosecutors, and select police personnel. In collaboration with the Save the Children alliance, these projects also involved conducting studies and providing technical advice to facilitate legal reform, including the integration of the 1989 Convention on the Rights of the Child into Ethiopian legislation. Moreover, efforts were made to establish "child protection units" within police stations. Additionally, in partnership with the Federal Supreme Court, Save the Children Sweden, and the British Embassy, the implementation of the "justice juvenile reform" project sought to make the justice system more responsive to the needs of children and youth. (Santos et al, 2020).

In South Africa, companies leverage Enterprise Resource Planning (ERP) systems to enhance customer responsiveness, strengthen supply chain partnerships, improve organizational flexibility, streamline decision-making, and reduce project completion time and costs (Hartono et al., 2019). Similarly, the Kenyan government, like other developing

nations, recognizes the significance of ICT in enhancing service delivery and has introduced it across various public sectors, particularly in publicly-owned corporations (Kim et al., 2019). However, challenges such as inflexible procurement rules and institutional frameworks complicate ICT system initiation, design, and implementation in the Kenyan Judiciary (de Rezende,2022).In South Africa, the construction and mining sectors have increasingly incorporated IT tools to manage complex projects. These tools aid in resource allocation, project scheduling, and risk management, leading to improved project performance (Akinyemi & Afolabi, 2020). South African firms report that the use of IT tools has helped them maintain project timelines and budgets more effectively.

In Nigeria, the oil and gas industry has embraced IT tools to address the unique challenges of large-scale projects. The use of project management software has enabled Nigerian companies to better coordinate activities, manage supply chains, and ensure compliance with environmental regulations (Omole, 2021). The integration of these tools has resulted in more efficient project execution and enhanced operational transparency.

In Rwanda, according to the Office of the Auditor General (OAG) in 2019, it was observed that out of 41 contracts, the Rwanda Transport Development Agency (RTDA) extended the completion period for work by a range of 50% to 250% from the initially planned duration. Additionally, for 32 contracts, an amount totaling Frw 42,995,285,540 was added to the original contract amount to complete the work. The management ascribed these discrepancies to a number of causes, such as protracted road design studies, unpaid contractor invoices, and delayed payments for expropriation , unexpected adverse climatic conditions such as heavy rainy seasons resulting in challenges like landslides on certain road sections, and unforeseen additional works required (OAG, 2019).

While the justifications for the variations in cost and time were provided, some of the reasons indicate existing gaps in the planning and execution of road projects. These

variations ultimately lead to delays in completing the works and may therefore compromise the financial return on investment for research on road design, building, restoration, and maintenance (OAG, 2019).

Ndawula, Katerega, and Abubakali (2017) shed light on the challenges faced by education sector projects initiated by the Ugandan government, particularly in higher learning institutions aimed at fostering competition, technology, and development. Lawani (2016) supports this perspective by emphasizing the necessity for a better understanding of project management performance within governmental institutions in developing nations.

Thaddee, Prudence and Valens, (2020) argue that a wide range of parties, including governments, commercial corporations, non-governmental organizations, international and local financial institutions, and local populations, are involved in many projects in Africa. These stakeholders often possess different interests and varying power dynamics, significantly impacting project implementation across Africa. Moulid et al (2021) further highlight countries like Tanzania, Malawi, Mozambique, and Angola as examples of African nations grappling with project failures in both public and private sectors. Various studies have identified a lack of information communication and technology in developing countries as a primary reason for project failures (Oyeyipo et al., 2019; Mavuti, Kising'u and Oyoo, 2019; Mishra, 2021). For instance, Obondi (2022), in a review of studies conducted in Ghana on the causes of delays and cost overruns in groundwater project construction in developing countries, found that 75% of the projects in Ghana exceeded their original schedules. Identified bottlenecks included difficulties in monthly payments, inadequate contract management, challenges in material procurement, inflation, and financial difficulties faced by contractors, indicating a lack of preparation and ineffective application of project management systems.

Despite the recognized importance of effective ICT implementation, developing countries often rely on trial-and-error approaches, leading to significant resource wastage (Crispim et al 2019). National ICT policies serve crucial functions by outlining goals and visions for ICT introduction and utilization within government agencies, as seen in Kenya's national ICT policy promulgated in 2006 (Butler et al 2020). This policy aims to enhance livelihoods by providing efficient, reliable, and affordable ICT services and emphasizes the use of ICT to improve service delivery in institutions (Majeed, 2020; Kimaru, 2019).

In developing countries like Kenya, project delays are a common occurrence, as noted by Kamau and Wainaina(2022). They argue that project management performance influenced by various operational parties lead to coordination difficulties, with each party pulling the project in different directions and causing dissatisfaction with project outcomes. Kimaru(2019) echo similar sentiments in their studies on time and cost overruns in power projects in Kenya. To address these issues, Kamau and Wainaina (2022). recommend that organizations adopt new technologies to enhance project delivery, cost efficiency, national service quality, and organizational management.

Similarly, Mwangi and Njiru (2022) propose that effective project management performance could involve implementing strategies like appropriate budget allocation, timely information distribution, simplified management structures, and efficient legal processes.

Reports by the Government of Kenya (GoK, 2020) and the World Bank (2020) on the construction of the Thika Superhighway illustrate the challenges faced in project implementation. Originally slated for completion in 2011, the project was delayed by a year and exceeded the allocated budget by an additional Kshs.7 billion. Political differences within the coalition government, insufficient stakeholder consultation, adverse weather conditions, technological inadequacies, and economic fluctuations contributed to

these setbacks. This pattern appears to affect various key projects, including judiciary projects in Kenya.

Despite efforts by project management practitioners and academics to understand project failures and recommend best practices, the desired effects have not always been realized, or the key practices were not fully grasped. A review by Morcov, Pintelon and Kusters(2020) suggests that project failure symptoms are prevalent across Africa, including Kenya. These symptoms encompass a wide range of inefficient project monitoring technologies, including obsolete time management practices , outdated project missions, outdated cost management practices , inadequate communication between the stake holders, insufficient monitoring and feedback during project implementation, inability to handle unexpected crises, political interference, environmental impacts, and a lack of urgency, particularly in public sector projects (Mavuti, Kising'u and Oyoo,2019; KPMG, 2019).

The judiciary in Kenya, has embarked on several development projects aimed at enhancing the efficiency and effectiveness of the judicial system. Despite these efforts, many projects have faced delays, cost overruns, and failures to meet intended outcomes. The integration of IT tools in the management of these projects is relatively underexplored, particularly in judiciary projects, which are critical for improving access to justice and ensuring the rule of law (Mwangi, 2023). The Nakuru Law Courts, like many other judiciary institutions in Kenya, have been implementing various IT tools to improve project management performance. However, the effectiveness of these tools in enhancing project outcomes remains uncertain (Kamau & Wainaina, 2022).

The judiciary's project management challenges in Kenya are multifaceted, including inadequate infrastructure, limited technical skills, and resistance to change among staff. Despite these challenges, there is a growing recognition of the potential benefits of IT tools

in improving project management practices. The judiciary's adoption of electronic communication tools, cost tracking systems, time tracking tools, and quality assurance methods is expected to streamline processes, enhance accountability, and improve overall project performance. This study aims to investigate the specific effects of these IT tools on the performance of judiciary projects, focusing on the Nakuru Law Courts as a case study.

1.2 Statement of the Problem

In contemporary project management, the integration of technology has become increasingly pivotal, ushering in challenges that project teams across various sectors now confront, challenges which were not as prevalent a decade ago (Majeed, 2020). Success in development projects is often measured by their ability to achieve timely completion, stay within budgetary constraints, and meet the expectations of stakeholders. However, in the context of Kenya's judiciary projects, a notable pattern emerges where many initiatives exceed their initial budget projections, encounter premature cancellations, or fall short in meeting the desired functional requirements (GoK, 2020). Despite extensive research exploring the utilization of Information Technology (IT) tools across sectors such as agriculture, education, and small-to-medium enterprises (SMEs), there remains a noticeable gap in understanding the role of IT in judiciary project management (Mbutu et al, 2022). Furthermore, the existing literature predominantly examines the impact of IT on project management within the construction industry in developed nations, leaving a void in exploring this relationship within the specific context of judiciary projects (Ghaleb & Abdullah, 2021). Therefore, this study seeks to address this gap by investigating the influence of information technology on project management performance, focusing specifically on the operations of the Nakuru law courts.

1.3 Purpose of the Study

The purpose of the study was to find out the impact of information technology tools on performance of judiciary projects in Nakuru law courts, Kenya.

1.4 Objectives of the Study

- i. To establish the impact of electronic communication tools on performance of judiciary projects in Nakuru law courts, Kenya.
- ii. To ascertain the impact of cost tracking tools on performance of judiciary projects in Nakuru law courts, Kenya.
- iii. To establish the impact of time tracking tools on performance of judiciary projects in Nakuru law courts, Kenya.
- iv. To establish the impact of the use of quality assurance tools on performance of judiciary projects in Nakuru law courts, Kenya.

1.5 Research Questions

- i. What is the impact of electronic communication tools on performance of judiciary projects in Nakuru law courts, Kenya.?
- ii. How does the utilization of cost tracking tools impact performance of judiciary projects in Nakuru law courts, Kenya.
- iii. What is the impact of time tracking tools on performance of judiciary projects in Nakuru law courts, Kenya.
- iv. How does the use of quality assurance tools impact performance of judiciary projects in Nakuru law courts, Kenya.

1.6 Significance of the Study

The significance of the study "Impact of Information Technology Tools on Project Management Performance of the Judiciary Projects in Kenya; A Case of Nakuru Law Courts" extends across various stakeholders, including policy makers, stakeholders, and

scholars. For policy makers, the findings can inform the development of ICT policies and strategies within the judiciary system, aiding in the effective utilization of technology for improved project management.

Understanding the impact of information technology tools on project management performance can greatly benefit stakeholders, including judiciary officials and project managers. This understanding can facilitate informed decision-making regarding resource allocation, project planning, and the implementation of best practices to ensure the success of judiciary projects.

Moreover, scholars may find value in the study's contribution to the academic discourse on the intersection of information technology and project management within the context of judiciary projects. By shedding light on this important area, the study has the potential to inspire further research and exploration, driving advancements in both theory and practice.

1.7 Scope of the Study

The scope of this study encompasses an in-depth investigation into the effect of information technology tools on project management performance within the context of Judiciary Projects in Kenya, focusing specifically on the Nakuru Law Courts. The study analyzed various information technology tools utilized in project management, including electronic communication tools, cost tracking tools, time tracking tools, and quality assurance tools. Surveys and document analysis were used to gather information from project managers, judges, and other pertinent parties engaged in the implementation of judicial initiatives. The study was carried out over the course of three months, from June to August of 2024.

1.8 Limitations of the Study

Several limitations affected the findings and generalizability of this study. Firstly, the study's scope was confined to Judiciary Projects in Kenya, particularly within the Nakuru Law Courts, which limited the applicability of findings to other contexts or jurisdictions. Additionally, the availability and accessibility of data and respondents may pose constraints on the depth and breadth of the analysis. Furthermore, the dynamic nature of information technology and project management practices may introduce potential biases or inaccuracies in the study's results.

1.9 Delimitations of the Study

This study is geographically delimited to the Nakuru Law Courts in Kenya, focusing specifically on the influence of information technology tools on project management performance within this jurisdiction. The target population for the study consisted of 4 judges, 47 directorate staff, 48 Stakeholder groups representing LSK, AG, DPP NGOS and Donors and 10 members from security.

1.10 Assumptions of the Study

Several assumptions underlie the design and implementation of this study. Firstly, the study assumes that the selected information technology tools play significant roles in influencing project management performance within the judiciary context. Secondly, it is assumed that respondents provided accurate and reliable data during surveys and interviews, enabling the researcher to draw valid conclusions. Additionally, the study assumed that the findings offered valuable insights and recommendations for enhancing the effectiveness and efficiency of judiciary projects, contributing to the broader discourse on information technology and project management in the legal sector.

1.11 Operational Delimitation of Key Terms

Cost Tracking Tools: These are programs or platforms designed to keep track of, document, and evaluate costs spent during the course of a project. They provide real-time updates on budget allocation, expenditures, and cost variances, enabling project managers to make informed decisions to ensure projects stay within budget.

Electronic Communication Tools: These are digital platforms, applications, or devices used to facilitate the exchange of information, messages, and data among project stakeholders.

Information Technology (IT): It includes the storing, retrieving, transmitting, and manipulating of data for a variety of uses through the use of computers, software, networks, and other digital technologies. It entails using technology to facilitate decisionmaking across enterprises, improve communication, expedite procedures, and solve business challenges.

Project Management Performance: This refers to the effectiveness and efficiency with which project objectives are achieved within the constraints of time, budget, scope, and quality.

Time Tracking Tools: These are tools or software applications used to monitor and record the amount of time spent on various project activities by team members.

Quality Assurance Tools: These are the instruments, procedures, or approaches used to guarantee that project deliverables fulfill predetermined requirements and quality standards.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The chapter delves into an extensive review of both theoretical and empirical literature concerning information technology tools and their correlation with project management

Performance, serving as the cornerstone of this research endeavor. Additionally, the chapter explores pertinent theories employed by the researcher to address gaps in existing research, conducts a critical analysis of previous empirical studies related to the topic, and concludes with a concise summary of the review.

2.2 Empirical Review

2.2.1 Electronic Communication Tools and Project Management Performance

Electronic communication tools have become integral to enhancing project management efficiency. In a study by Lee and Chang (2020), a mixed-methods research design was used to investigate the impact of electronic communication tools on project performance in South Korea. The target population comprised project managers from various industries, including construction, IT, and healthcare. The findings revealed that the use of email, instant messaging, and video conferencing significantly improved project coordination, reduced misunderstandings, and facilitated real-time problem-solving. However, a notable gap in this study was the lack of focus on specific sectors such as the judiciary, which has unique communication and documentation needs.

In another study, Wainaina and Ndungu (2022) employed a descriptive research design to examine the role of electronic communication tools in project management within Kenyan public sector projects. The target population included project managers and team members from government ministries. The study found that these tools enhanced meeting efficiency and project documentation, leading to fewer delays and better resource management. The main gap identified was the limited exploration of how these tools specifically impact the performance of judiciary projects, which often have different operational challenges compared to other public sector projects.

Ahmad et al. (2022) conducted a study examining the impact of electronic communications tools on project management performance within make-to-order manufacturing

organizations. Utilizing a questionnaire-based approach for data collection, the study revealed a significant correlation between the use of electronic communications tools and project success. Various statistical analyses, including tests for normality, correlation, multiple regression, and t-tests, were employed to ascertain the relationships between variables. Notably, effective communication with both project teams and clients emerged as a crucial factor contributing to project success. The authors observed that successful project managers demonstrate proficiency in communication, emphasizing its importance as a people competency. The study's conclusions are consistent with earlier research, supporting the notion that, in make-to-order manufacturing contexts, electronic communications tools are critical to project success. The study attempts to close this gap by measuring the degree to which communication affects project results, despite the fact that it recognizes a general lack of specificity regarding the significance of communication in project success.

In addition, Mavuso and Agumba (2016) presented a conceptual model for communication management based on findings from a thorough analysis of the literature. Their findings suggest that various factors, including technology and systems, communication skills, a structured communication plan, collaboration and teamwork, organizational structure, stakeholders' perspectives, project briefing, and environmental context, positively impact project success. This highlights the multifaceted nature of communication management and its significance in enhancing project outcomes.

A study conducted in India by Bhoola (2015) investigated the impact of project success factors on management software projects, involving 302 IT project managers. The research revealed that streamlined and transparent communication significantly improves the efficiency of management and other stakeholders, thereby enhancing project effectiveness. Effective communication tools fosters collaboration among team members and

underscores the importance of regular audits of both budgetary and progress reports for project effectiveness. Furthermore, the study emphasized that the adoption of new and advanced technology can contribute to project success. Clear and effective communication encourages appropriate interactions, flexible working arrangements, stakeholder involvement, well-defined roles, adequate resources, and a professional work environment (Bhoola, 2015).

2.2.3 Cost Tracking Tools and Project Management Performance

Cost tracking tools are crucial for maintaining budgetary discipline in project management. Smith and Brown (2021) conducted a quantitative study using a survey design to assess the impact of cost tracking tools on project performance in the construction industry in the United States. The target population was project managers from large construction firms. The findings indicated that sophisticated cost tracking tools, such as budget software and financial dashboards, significantly reduced cost overruns and improved budget adherence. However, the study did not address the applicability of these tools in smaller projects or in different sectors, leaving a gap in understanding their impact in diverse project environments.

Kamau (2021) utilized a case study research design to explore cost management practices in Kenyan public infrastructure projects. The target population included project managers from various government-funded projects. The study revealed that the implementation of cost tracking tools led to better financial oversight and accountability, helping projects stay within budget. Despite these positive outcomes, the study highlighted a gap in the integration of these tools in the judiciary sector, where budgetary constraints and unique financial management needs pose additional challenges.

A study conducted by the World Bank on Guatemala's Conditional Cash Transfer Program found that the adoption of mobile data collection led to a notable decrease in survey costs,

with an average reduction of 71% (Schuster & Brito, 2011). This shift towards electronic data collection not only lowers data entry expenses but also facilitates quicker access to information. Furthermore, electronic methods offer enhanced data accuracy compared to traditional pen-and-paper approaches, which are susceptible to manipulation or loss (Satterlee et al., 2015).

According to Nanda (2017), technology introduces a novel area of interest for practitioners, particularly emphasizing the benefits of real-time feedback and results. Integrating new technologies into Monitoring and Evaluation (M&E) processes has demonstrated advantages such as cost reduction, improved accuracy, and the acquisition of high-quality data, leading to a deeper understanding of project dynamics.

Diverse data collection formats, including GPS, GIS, and multimedia data, offer various avenues for gaining detailed insights in M&E practice (Nanda, 2017). Mobile technology has enhanced the communication of project lessons and results, while enabling remote and real-time project management and monitoring. Additionally, technological platforms provide sophisticated learning opportunities through visualization dashboards, geospatial mapping, and analytics, offering better insights into project performance (Nanda, 2017).

Jessen (2021) carried out research to find out how using technology affects project success. Utilizing secondary information and findings from two earlier worldwide studies, the study investigated the effects of technology integration in project management and scheduling. The first study evaluated the effects of technology tools on three primary project success indicators: adherence to schedule, budget compliance, and fulfillment of agreed-upon scope. Conversely, the second study adopted a broader perspective on project success, encompassing factors such as stakeholder satisfaction. The findings from the first study suggested that the strategic use of appropriate cost tracking tools in project planning in project management positively impacts project success. However, the outcomes from

the second study indicated that the effects of technological tools on specific project success criteria varied. Consequently, Jessen recommended that organizations should identify their primary project success criteria to determine the requisite level of technical tools needed. Abdu, Bandar, and Nejmeddine (2022) conducted a study on Software Cost tracking within the Saudi Arabian Software Industry, emphasizing the critical role of accurate cost estimation in the success of software projects. They noted that while software industries have made significant contributions across various sectors globally, they also face challenges, particularly high failure rates in software project development. A key contributor to this failure is inaccurate software cost tracking, which entails estimating the costs associated with building software projects. The researchers emphasized that during the development phase of any software project, effective management of time, effort, and other resources based on accurate cost estimation is pivotal for project success. Their survey identified four main reasons for inaccuracies in cost estimation methods: unclear requirements, pressure from clients or top management, lack of historical project data, and failure to utilize dedicated cost estimation software.

2.2.3 Time Tracking Tools and Project Management Performance

Time tracking tools play a vital role in ensuring project activities are completed on schedule. Turner (2019) conducted a longitudinal study to examine the effectiveness of time tracking software in IT projects in the United Kingdom. The target population was IT project managers and team members. The findings showed that time tracking tools, such as Gantt charts and project scheduling applications, improved task prioritization and adherence to deadlines. However, the study was limited to IT projects, leaving a gap in understanding the effectiveness of these tools in other sectors like the judiciary.

Ochieng (2020) used a cross-sectional research design to study time management practices in Kenyan public sector projects. The target population included project managers from

various government departments. The study found that the use of time tracking tools led to more accurate scheduling and fewer project delays. Despite these benefits, the research identified a gap in the application of these tools in judiciary projects, where procedural and regulatory complexities can impact time management.

Ogunberu, Akintelu, and Olaposi (2021) conducted a study investigating the impact of utilizing time tracking tools on project success in Information and Communication Technology (ICT) projects. They identified key success criteria in project time management, including customer satisfaction, customer expectations, project costing, project quality, and project duration. The study utilized questionnaires for primary data collection, employing both descriptive and inferential statistical analyses. Four of the six indicators—customer expectations, customer satisfaction, resource allocation, and project duration—significantly influenced project success at the 0.05 level of significance, according to regression analysis. However, project costing and project quality did not show significant impacts. The findings indicated satisfactory project success criteria with the implementation of time tracking tools in project management practices.

The performance of government building projects in Kenya was examined by Mbutu, Ngugi, and Ombui (2022) in connection to the definition of time schedule tools. With the use of semi-structured questionnaires and a cross-sectional and descriptive study design, they gathered primary data. Their study demonstrated a positive and significant correlation between time schedule definition and project performance.

Ramage (2019) explored time management strategies employed by project leaders in engineering to enhance project success rates. Utilizing a qualitative research approach, Ramage conducted document reviews of company records and semi-structured interviews with selected project leaders for primary data collection. The findings found out the importance of implementing time management systems involving all stakeholders to improve project success rates in engineering projects.

In their survey on the impact of time tracking tools on project success, Ghaleb and Abdullah (2021) found a strong link between the use of time tracking tools and project success. These results were in line with earlier research by Kim and Ryu (2019) and Aborhor and Baiden (2021). The study concluded that effective time tracking tool management is crucial for project success in Make-to-Order Organizations.

In Rwanda, Mata et al. (2023) looked into how time management programs affected project success. With the use of questionnaires and interviews, the study used a descriptive research approach to gather primary data, which was then augmented with secondary data from published sources.

The findings indicated that time management tools positively influenced project outcomes but also highlighted the risks associated with unanticipated changes, such as delays and resource constraints. Menon, (2019) analyzed the significance of time tracking tools in project success through literature review. They emphasized the importance of implementing time tracking tools at the project's outset, citing it as a leading cause of project failure. The study aimed to contribute to the existing literature on time management, particularly its relationship to project success and its implications for project complexity

2.2.4 Quality Assurance Tools and Project Management Performance

Quality assurance tools are essential for ensuring that project deliverables meet the required standards. Kerzner (2021) conducted an experimental research design to assess the impact of quality management software on project success in the manufacturing sector in Germany. The target population was project managers from manufacturing companies. The study found that the use of quality assurance tools led to higher project success rates by ensuring compliance with quality standards and reducing rework. The gap identified was the lack of focus on service-oriented projects, such as those in the judiciary, where quality metrics can be different.

Mwangi and Njiru (2022) used a mixed-methods research design to investigate quality management practices in Kenyan public sector projects. The target population included project managers and quality assurance officers from various government projects. The study revealed that the implementation of quality assurance tools significantly improved project outcomes, with higher stakeholder satisfaction and fewer project revisions. However, the study pointed out a gap in the exploration of these tools specifically in judiciary projects, where quality assurance may involve different criteria and challenges.

Rahman, Shafique, and Rashid (2020) investigated the association between the utilization of Project Management Information Systems (PMIS) and project success. Employing a quantitative research approach, they gathered primary data through a questionnaire survey. Data analysis involved correlation and regression techniques. Project success and the use of quality management technologies are significantly correlated, according to the study. In order to improve their project management skills, it also recommended that organizations give top priority to the quality and application of PMIS.

In their 2019 study, Ngari and Ndiritu investigated the connection between project performance and the use of quality monitoring software in youth polytechnic development initiatives in Kenya's Embu County. They conducted primary data collection through structured questionnaires distributed to project managers and analyzed the data using correlation analysis. The findings suggested that utilizing software to generate high-quality project information enables project managers to execute their tasks professionally, thereby increasing the likelihood of project success. The study emphasized that the effectiveness of systems lies not in its complexity but in the relevance of the generated information and the user's ability to leverage it for project management. It recommended the adoption of quality management software by youth polytechnics for project management purposes.

In the South Rift region of Kenya, Bor and Kiptum (2020) evaluated the effect of Integrated PMIS on the performance of construction projects. They collected data using both qualitative and quantitative methods, and they used regression and correlation analysis for analysis. The results of the study showed a strong correlation between project performance and PMIS quality.

It also came to the conclusion that, in order to guarantee competence and boost productivity, management in South Rift construction companies should give technical training on project management quality assurance tools top priority. In order to further enhance project quality, the study also suggested obtaining modern information systems infrastructure, such as web-based utilities.

2.3 Theoretical Review

This section presents theories evaluated by various scholars regarding ICT adoption in institutions and the integration of ICT usage in public sector on project management performance in Kenya. Scholars in this field have utilized diverse theories to explain Information Technology adoption. These theories include the theory of diffusion of innovation (Rogers, 1995) as discussed by Sahin (2006), systems theory (Chikere & Nwoka, 2014), the theory of reasoned action (Ajzen & Fishbein, 2012), the theory of planned behavior (Ajzen, 1991), and the technology acceptance model (Chuttur, 2009). Manuelli, Latu, and Koh (2003) propose three approaches with robust theoretical foundations for explaining technology adoption models. These approaches entail understanding the system, evaluating the innovation, and comprehending how the system embraces the new technology. Consequently, this study incorporates three theories: diffusion of innovation, systems theory, and the technology acceptance model, to comprehensively analyze ICT adoption and usage.

2.3.1 Diffusion of Innovations (DOI) Theory

This theory, developed by Rogers in 1962, highlights two stages explaining how innovation spreads from its inception to its adoption by users (Rogers, 1962). According to Rogers, the theory encompasses the mechanisms behind how, why, and at what pace new ICT-related ideas are embraced within an organization. The Theory of Diffusion of Innovation (DOI) comprises four key elements identified by Rogers: innovation, communication channel, time, and social channels. Sahin (2006) notes that information users must perceive the innovation as novel and consider factors such as system complexity, compatibility with existing systems, trial-ability, observability, and relative advantage compared to alternatives.

Rogers (1962) suggests that under relative advantage, the new technology must enhance the organization's prestige and economic viability to maintain competitiveness. As a service-oriented institution, evaluating return on investment is crucial to investing in beneficial technologies. Rogers also highlights the concept of triability, indicating that the ease of adopting new technology depends on the minimal investment required for trial. Demonstrating the benefits of new technology to the organization and users involves measuring customer satisfaction and service improvement. Observability, according to Rogers (1962), entails witnessing the technology's functioning postinstallation and acknowledging its benefits, which can reduce resistance to change during system implementation. Successful system implementation, with positive results and functionality, increases the likelihood of adoption (Mutsheva, 2007), as users perceive observable benefits.

The essence of Rogers' theory of diffusion (1995) lies in defining the four elements. Firstly, innovation is described as a new idea or object perceived as such by adopters, initiating awareness about its potential integration into project management performance.

Subsequently, stakeholders engage in decision-making processes regarding the adoption or rejection of the innovation, emphasizing informed decision-making involving all participants. Upon adoption, successful implementation leads to continued use. This theory aligns with the first research objective, examining the effect of Electronic Communication Tools on Project Management Performance.

2.3.2 Systems Theory

Ludwig Von Bertalanffy introduced System theory in 1923, originally developed as a biological concept (Chikere & Nwoka, 2014). Ludwig (1989) defines a system as any interconnected and interdependent entity or an element composed of multiple parts that function cohesively. This implies that the judiciary operates as a system with various interdependent units collaborating to achieve common objectives. While each department within the judiciary has distinct mandates and structures, they must collaborate to ensure project success. The subsystems comprising the overall system can be considered semiautonomous, as they rely on each other for operation.

Systems can be categorized as controlled or uncontrolled. In a controlled system, information is sensed, and adjustments are made based on that information. Mele et al. (2010) describe this as the detector and effect functions of the system. For example, changes in financial budgets proposed by project financiers prompt adjustments within the system, representing the effect or function of information. The detector function involves the transmission of relevant financial information between systems, which can be facilitated through various means such as emails, chat rooms, and e-conferencing. According to this theory, a functionalist approach is deemed optimal for evaluating the roles of subsystems within a system. This approach was utilized to examine the roles of Cost Tracking Tools and Project Management Performance (Njru, 2017).

Critiques of this theory suggest that many applications of system dynamics are either inaccurate or tailored to fit specific problems, leading to an exogenous influence on the system's feedback structure. This theory supports the third and fourth research objectives, which aim to evaluate the impact of cost tracking system and time tracking tools on Project Management Performance.

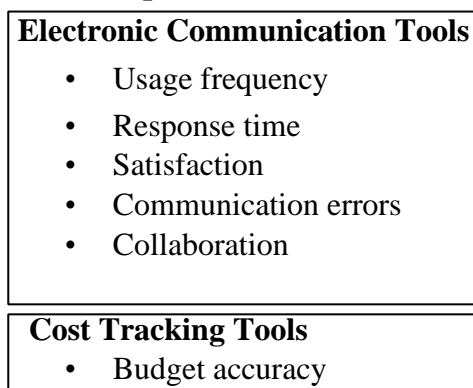
2.3.3 Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM) was initially introduced by Davis in 1989 as a theory within information systems, aimed at modeling individuals' acceptance of technology (Davis, 1985). Davis's model suggests that users' decisions to adopt a new technology are influenced by perceived usefulness and perceived ease of use. Perceived usefulness refers to users' belief that a specific system will enhance their work performance, while perceived ease of use relates to the degree to which users believe that using the system will simplify their tasks.

According to Davis (1989), as cited in Gyaase et al. (2013), TAM elucidates the relationships between external variables, perceived usefulness, ease of use, attitude toward usage, and actual usage behavior. TAM serves as an informative framework for understanding user acceptance and usage behavior of information technology in the workplace. It outlines the factors influencing users' perceptions of a new technology when introduced and utilized. For our study, TAM provides a theoretical foundation depicting the relationship between users' acceptance of a new information system and their perceptions of its use in project management. Users who perceive the new technology as easy to adopt find it easier to use the system compared to those who perceive it as difficult. However, a critical evaluation reveals that TAM does not fully address social influences on technology adoption and presents some usage limitations beyond the workplace (Gyaase et al., 2013).

Gefen and Larsen (2017) argue that while some variables in TAM are considered external, incorporating them into TAM can enhance the model's predictive consistency regarding the system. They contend that intrinsic motivations are often overlooked in TAM applications. The adoption of quality assurance tools represents a new technology that users need to accept and perceive as an easy method for performing their tasks. This theory aligns with the fourth research objective, which aims to examine the effect of quality assurance tools on project management performance in Kenya.

2.4 Conceptual Framework



Independent Variables Intervening Variable Dependent Variable
Figure 1: Conceptual Framework Source: Researcher (2024)

Electronic Communication Tools: These are the tools and technologies used to facilitate communication within the judiciary projects, such as emails, instant messaging, video conferencing, and project management software. The indicators of electronic communication tools include; frequency of tool usage, the type of tools used (e.g., email, video conferencing), user satisfaction with these tools, and the efficiency of communication (measured by response time or the number of communication errors).

Cost Tracking Tools: These tools are used to monitor and control the costs associated with judiciary projects, including budgeting software, expense tracking applications, and financial reporting systems. Indicators are Accuracy of cost estimates, frequency of budget reviews, the variance between estimated and actual costs, and user satisfaction with the cost tracking tools.

Time Tracking Tools: These tools are used to monitor and manage the time spent on various tasks and activities within the judiciary projects, such as timesheets, project timelines, and scheduling software. Indicators include the accuracy of time logs, the frequency of time tracking, the variance between planned and actual timelines, and the efficiency of time management processes.

Quality Assurance Tools: These tools ensure that the judiciary projects meet the required quality standards, including checklists, quality control software, and standard operating procedures. Indicators include the number of quality checks performed, the frequency of quality audits, the number of defects or non-conformities identified, and user satisfaction with the quality assurance processes.

Performance of Judiciary Projects: This refers to the overall success and efficiency of the judiciary projects in meeting their objectives and delivering expected outcomes. Indicators: Project completion rates, adherence to timelines, budget compliance, stakeholder satisfaction, the quality of deliverables, the number of completed milestones, and the incidence of project-related issues or delays.

2.5 Recap of Literature Review

Studies by Ahmad et al. (2022), Mavuso and Agumba (2016), and Bhoola (2015) have highlighted the significance of effective communication in project success. Utilizing electronic communication tools has been associated with improved project outcomes, including better collaboration, streamlined processes, and enhanced stakeholder engagement. These findings underscore the importance of integrating communication technologies into project management practices.

Research on cost tracking tools by Schuster & Brito (2011), Nanda (2017), Jessen (2021), and Abdu et al. (2022) emphasizes the benefits of technology adoption in project cost management. Electronic data collection methods have been shown to reduce survey costs and improve data accuracy, leading to better decision-making and resource allocation. Moreover, accurate cost estimation is crucial for software project success, highlighting the importance of utilizing dedicated cost estimation software.

Studies by Ogunberu et al. (2021), Mbutu et al. (2022), Ramage (2019), Ghaleb and Abdullah (2021), and Mata et al. (2023) have explored the relationship between time tracking tools and project success. Implementing time tracking tools has been associated with improved project scheduling, resource allocation, and overall performance. Effective time management systems contribute to project success by minimizing delays and ensuring timely project delivery.

Research on quality assurance tools by Rahman et al. (2020), Ngari and Ndiritu (2019), and Bor and Kiptum (2020) has highlighted the importance of quality management systems in project success. Utilizing project management information systems (PMIS) and quality monitoring software has been linked to improved project performance, better decision-making, and enhanced productivity. These findings underscore the need for organizations to invest in quality assurance tools to ensure project success.

HAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter serves as the methodological framework for this study, outlining the approach to be undertaken in achieving the research objectives outlined in the preceding chapters. This chapter comprehensively detailed the research design, specify the target population, the sampling technique to be employed, define the sample size, describe the research instrument(s) to be utilized, expound upon data quality strategies, articulate the data collection procedure, outline the proposed data analysis techniques, and address ethical considerations pertinent to the study. By providing a structured methodology, this chapter aims to ensure the rigor, validity, and reliability of the research findings, thereby contributing to the overall credibility and trustworthiness of the study's outcomes.

3.2 Research Design

Creswell (2017) defines a research design as comprising procedures and plans that facilitate the progression from assumptions to data collection and eventual analysis. According to Creswell (2017), a research design consists of inquiries that employ qualitative, quantitative, or mixed approaches to guide the research direction. In line with this perspective, a mixed approach was employed and the present study utilized a descriptive research design, chosen for its capacity to provide a realistic depiction of

existing phenomena, thereby enabling the generalization of factual information. As noted by Kombo and Tromp (2006), descriptive research goes beyond mere fact-finding, offering valuable insights that may contribute to problem-solving.

3.3 Study Locations

The first move toward a coordinated approach to the administration of justice began in 2005 when actors in the criminal justice system in Nakuru law courts began to engage regularly. The engagement arose from the need to address the recurrent operational and legal challenges that led to the massive dismissal of cases on technicalities and delays due to inefficiencies of players in the justice sector. There was low faith in the Judiciary and the police due to the lengthy trials and complicated judicial processes. The constellation of these challenges had yielded inadequate redress of disputes through Courts. Against this backdrop, in 2006, the leadership of the Nakuru Law Court at the time and the Kenya Magistrates and Judges Association (KMJA) proposed establishing the Court User Committee (CUCs) as a forum to deliberate and resolve the challenges and frustrations that characterised the administration of justice. Therefore, it was felt that addressing the existing institutional inefficiencies and heightened public involvement in judicial processes would foster mutual understanding, participation, clarity, and timeliness in rendering judicial decisions.

3.3 Target Population

Mugenda and Mugenda (1999) define population as an entire group of individuals, events or objects having common observable characteristics. Cooper and Schindler (2011) stated that, a population involves a group of individuals, objects or items from which samples are taken for measurement. In other words, population is the aggregate of all that conforms to a given specification. The target population for the study consisted of 4 judges, 47 directorate staff, 48 Stakeholder groups representing LSK, AG, DPP NGOS and Donors

and 10 members from security sector all the above members are directly involved in project management performance at Nakuru Law courts as shown in table 1 below.

Table 1: Target Population

Department	Population	Percentage
Judges	4	3.7
Directorate staff	47	43.1
Security	10	9.2
Other Stakeholders	48	44
Total	109	100

Source (Judiciary Service Commission, 2024)

3.4 Sample Size and Sample Selection

A sample is the segment of the population that is selected for investigation. It is also small group taken from a larger population composed of members being studied. Sampling is the process of selecting a sufficient number of individuals or objects, that the selected group contains elements representative of the characteristics found in the entire group (Orodho& Kombo, 2012). The study adopted the Nassiuma (2000) method in determining the sample size that asserts that in most surveys or experiments, a coefficient of variation in the range of 21% to 30% and a standard error in the range of 2% to 5% is usually acceptable. The Nassiuma's formula considers a coefficient variation of 21% and a standard error of 2% were used in this study. The formula is written as.

$$S = \frac{N (CV^2)}{CV^2 + (N - 1) E^2}$$

Where;

S = Sample size

N = Population

CV = Coefficient of Variation

E = Standard Error

After replacing the values, the sample size of respondents will be:

$$n = \frac{109(0.21)}{0.21 + (109 - 1)0.02}$$

From the formula as ample of 55 respondents will be picked be calculated as

Table 2: Sampling Frame

Population	Sampling Frame	Sample Size	Sampling Method
Judges	4	2	Purposive
Directorate staff	47	24	Random
Security	10	5	Random
Other Stakeholders	48	24	Stratified/Random
Total	109	55	

Source: Researcher 2024

. The probability technique was used for the selection of directorate staff and stakeholder groups. Using the technique, the researcher used random sampling as a basis of identifying the departments whose respondents the research instruments were administered. Stakeholders' groups were stratified into groups and randomly sampled while the stakeholders were selected using multi stage sampling technique. The purposive sampling a non-probability sampling technique were applied to security department.

3.6 Data Collection Instruments

Surveys are well-suited for gathering data through the use of questionnaires (Dempsey, 2019; Saunders, Lewis, & Thornhill, 2014). The questionnaire was designed and developed guided by the study research objectives. The questionnaire was divided into two sections. Section I comprised the demographic information Section II comprised the independent variables. The questions relating to the variables under study was on the 5likert psychometric scale. The respondents were asked to indicate whether they agreed,

were neutral, or disagreed. According to Norman (2010), the best measurement scale for capturing the intensity of respondents' attitudes and feelings toward a given item under investigation is the Likert scale. The questionnaires comprised mainly closed-ended questions to seek specific answers on the variables in question. The questionnaire was administered to respondents in Nakuru Law courts.

3.6 Pilot Study

A pilot test was carried out involving 21 respondents from the Naivasha Law courts to obtain data that was analysed using SPSS V 22 to determine the reliability coefficient. The questionnaires were administered and the participants were asked to make suggestions about the instructions, clarity of questions and relevance. The responses were used to improve the clarity, relevance and reliability of items in the questionnaire.

3.7 Validity of the Instrument

According to Mugenda and Mugenda (2013), validity is the accuracy and meaningfulness of inferences, which are based on the research results. It is the degree to which results obtained from the analysis of the data actually represent the phenomenon under study. Content validity was determined by pilot testing the instrument. This involved actual data collection from 21 respondents from Naivasha Law courts to get feedback on whether or not the instrument was to work as expected. The field pilot results were also considered in improving the validity of the questionnaire and for logistical planning.

3.7.1 Reliability of the Instrument

According to Mugenda and Mugenda (2013), reliability is a measure of the degree to which a research instrument yields consistent results. In this research, reliability was assessed for internal consistency by use of test-retest technique. Test-retest reliability is the degree to which scores are consistent over time. It indicates score variation that occurs from testing session to another testing session to check for errors which occur as a result of errors of

measurement. Reliability was improved by standardizing the conditions under which measurement takes place. Research assistants were also be trained and briefed on the conduct of the research to further improve reliability.

3.8 Data Collection Procedure

The researcher implemented the questionnaire by framing the variables as inquiries to serve as suitable indicators for gathering pertinent data. The distribution of the questionnaires involved providing them to respondents for completion. To facilitate this process, a research assistant were engaged to assist in disseminating the questionnaires to the participants. The questionnaires were distributed randomly among the respondents in Nakuru law courts. Moreover, an introductory letter accompanied the questionnaires, instructing the recipients to carefully review the questions before responding thoughtfully. The questionnaires were completed while the researcher or research assistant awaits their collection.

3.9 Data Analysis and Presentation

Dempsey (2019), notes that, this phase is crucial in both scientific and social science research as it ensures the comprehensive capture of all relevant data for subsequent comparison and analysis. The analysis of field data in this study employed two distinct methodologies: quantitative and qualitative methods. Quantitative methods were primarily be concerned with examining aggregates, identifying general trends, and calculating averages and proportions. Conversely, qualitative data analysis aimed to derive overarching statements regarding the interrelationships among categories or themes identified within the collected data (Dempsey, 2019). Quantitative data underwent coding, entry, and analysis using the Statistical Package for Social Sciences (SPSS) software program. The data went thorough editing and organization to align with demographic parameters, groupings, and research inquiries before being appropriately coded. The

fundamental objective of coding was to establish codes and scales derived from the responses, facilitating their summary and analysis through various avenues (Kombo & Tromp, 2006).

The Data collected was analyzed using both the descriptive and the inferential statistics. Quantitative methods of data analysis was employed with both descriptive and inferential statistics (frequency means and standard deviations) being applied to explain each objective of the study. Descriptive statistics is preferred because it aids the study to meaningfully describe the population of study and was used to compute data frequency, percentage, percentage mean and STD deviation results aided by Statistical Packages for Social Science (SPSS). Qualitative data was analysed thematically along the study objectives. The analyzed data was presented using frequency tables, bar graphs and pie charts using percentages and measure of central tendency . The advantages of using frequency tables and bar graphs and chart are that frequency tables and bar graphs and charts present data in multiple categories and helps to summarize a large amount of data in a visual, easily interpretable form, (Crossman, 2013).

The following regression model was fitted.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \epsilon$$

Where:

Y= Project Management Performance

X₁ = Electronic Communication Tools

X₂ = Cost Tracking Tools

X₃ = Time Tracking Tools

X₄ = Quality Assurance Tools

ϵ = Error Term β_0 = Minimum when all the independent variables are held constant at zero (referred to as constant or intercept)

3.10 Ethical Considerations

3.10.1 Ethical Considerations Related to Research Process

The researcher got approvals and authorization from Mount Kenya University and a research permit from the Ministry of Education in Kenya, more specifically from the National Commission for Science, Technology and Innovation (NACOSTI) to conduct the research.

When carrying out data collection, analysis and publication the researcher ensured that confidentiality and anonymity principles are not breached. The researcher also drafted a letter to the Nakuru Law courts administrators asking for authorization to utilize the constituents as participants in this investigation. The researcher also observed highest research ethics and standards such as honesty, transparency and confidentiality throughout the research process.

3.10.2 Ethical Considerations Related to Researcher

The researchers respected the autonomy of research participants, maintain professional integrity and respect for diversity. Researcher also treated participants with courtesy and respect, and never exploiting them or taking advantage of them for personal gain or benefit.

3.10.3 Ethical Considerations Related to Respondents

The researcher visited the selected participants to inform the intent to conduct a study and then seek their informed consent to participate. Researcher made sure they participants understand the research, their rights, the risks and benefits involved, and the data that was collected. The respondents were also assured of their privacy, anonymity and safety.

CHAPTER FOUR

DATA ANALYSIS AND PRESENTATION OF FINDINGS

4.1 Introduction

The primary aim of this study was to investigate the effect of information technology tools on the performance of judiciary projects in Nakuru Law Courts, Kenya. The research focused on four specific objectives: to determine the impact of electronic communication tools on the performance of judiciary projects, to assess the effect of cost tracking tools, to explore the influence of time tracking tools, and to evaluate the impact of quality assurance tools on the performance of judiciary projects in Nakuru Law Courts. The findings from the study are detailed in the following sections.

4.2 Response Rate

The response rate refers to the percentage of questionnaires that were completed and returned out of the total number distributed. In this study, 55 employees from the Nakuru Law Courts were targeted. As shown in Table 3, an 89% response rate was achieved, indicating that the data collected was sufficient for analysis. According to Mugenda (2013), a response rate of 50% is considered acceptable, while a rate above 80% is regarded as excellent.

Table 3: Response Rate

Response Rate	Frequency	Percent
Returned Questionnaires	49	89%
Unreturned Questionnaires	6	11%
Total	55	100%

4.2.2 Reliability of Study Variables

The study sought to find out the reliability of the study instrument. This was important to ensure that study findings are reliable.

Table 4: Reliability Results

Variable	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	Number of Items
Electronic communication tools	0.726	0.752	20
Cost tracking tools	0.749	0.784	20
Time tracking tools	0.802	0.811	20
Quality assurance tools	0.818	0.822	20
Project Performance	0.712	0.763	20

The reliability results from table 4 indicate high internal consistency across all categories.

All variables—electronic communication tools ($\alpha = 0.726$), cost tracking tools ($\alpha = 0.749$), time tracking tools ($\alpha = 0.802$), quality assurance tools ($\alpha = 0.818$), and project performance ($\alpha = 0.712$)—exceed the acceptable threshold of 0.7. This consistency across variables implies that the survey items are reliably capturing the intended aspects, making the data suitable for further analysis.

4.3 Demographic Characteristics

This section outlines the demographic characteristics of the participants involved in the study. In social science research, understanding respondents' background information is crucial as it allows for the categorization of participants into diverse groups. The study collected data on gender, age, level of education, and work experience, which are detailed in the following sections.

4.3.1 Distribution of the Respondents Based on the Gender

The study sought to understand the distribution of respondents based on gender. Collecting the gender of respondents in this study was crucial for understanding diverse perspectives and potential disparities. Gender can influence how individuals interact with technology,

and identifying these differences can help highlight any specific challenges or barriers faced by different genders. Pictorial presentation in Figure 2 shows that majority 59 percent of respondents working in Nakuru Law courts were female as compared to 41 percent male. This shows a fair gender distribution hence the findings can be generalized to both genders.

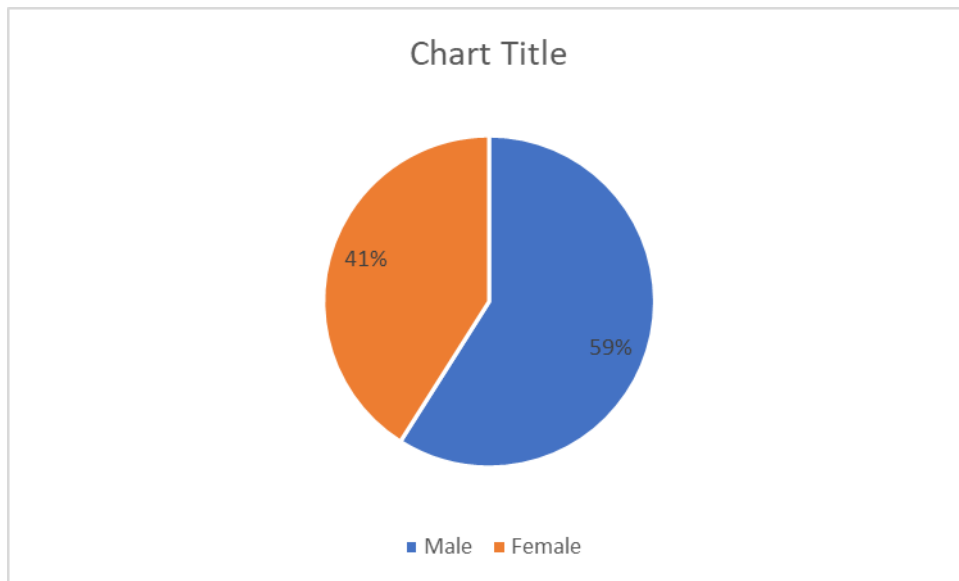


Figure 2: Gender

4.3.2 Distribution of the Respondents Based on Age Bracket

The age distribution of the respondents shows a diverse range of age groups. The majority of participants fall within the 31-40 age bracket, accounting for 32%, indicating a relatively young and potentially more technologically adaptable workforce. This is followed by the 41-50 age group, which makes up 27% of the respondents, suggesting a significant representation of experienced individuals who may have a balanced view of traditional and modern approaches in the judiciary. Respondents aged 18-30 constitute 23%, indicating the presence of younger employees who may be more familiar with current information technology tools. Lastly, 18% of the respondents are above 50, representing the most experienced demographic, who may have more traditional views on

technology use but also provide valuable insights into the changes in judiciary processes over time. This is shown in figure 3 below

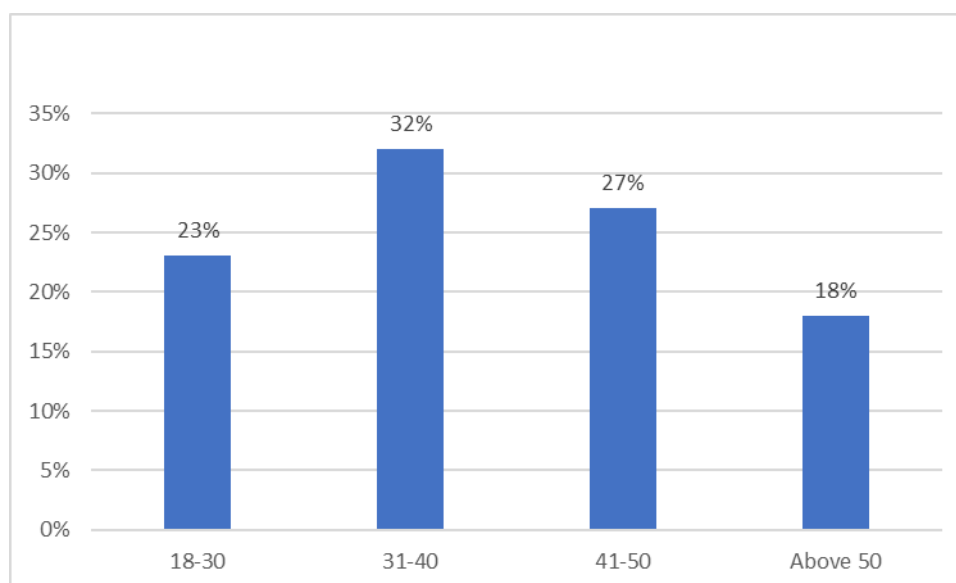


Figure 3: Age Distribution

4.3.2 Distribution of the Respondents Based on Level of Education

Figure 4 represents the educational background of the respondents. The largest segment, comprising 38%, holds a degree, indicating that a significant portion of the workforce in Nakuru Law Courts is highly educated and likely well-versed in their respective fields. Following this, 29% of the respondents have a diploma qualification, suggesting that a considerable number have a practical and technical education that could contribute to the application of information technology tools in the judiciary. Postgraduate qualifications account for 18% of the respondents, representing those with advanced knowledge and specialized skills, potentially leading to innovative and strategic thinking in project management. Lastly, 15% of the respondents have completed secondary education (KCSE), indicating a smaller group with a more basic level of education. This distribution shows a diverse range of educational levels among the respondents, which can influence the adoption and use of IT tools in the judiciary projects.

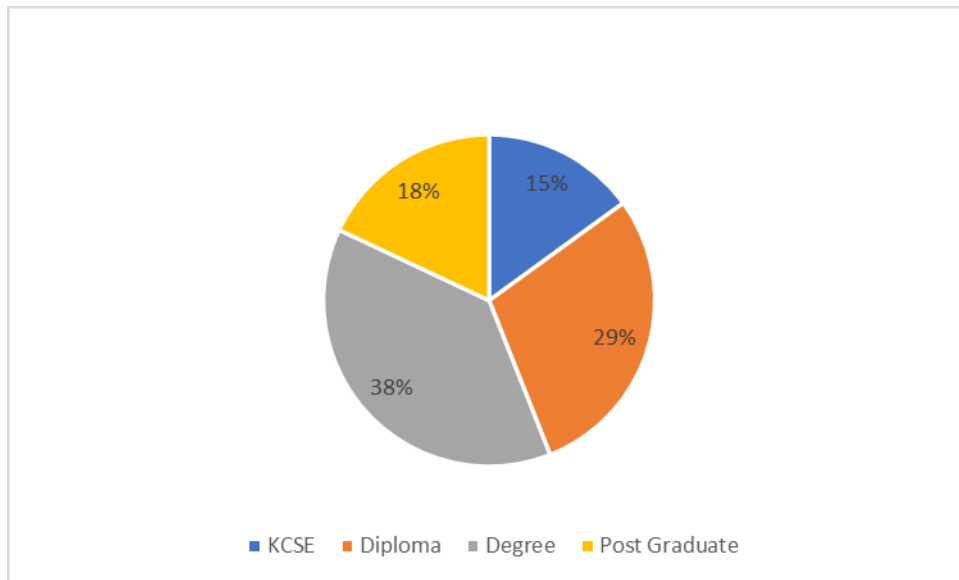


Figure 4: Level of Education

4.3.4 Distribution of the Respondents Experience

Work experience within an institution may lead to individual understanding of different facets ICT tools on project performance. As shown in Figure 5 the distribution of work experience among participants is varied: 17% have less than 5 years of experience, indicating a relatively new workforce. Those with 5 to 9 years of experience make up 22%, reflecting a moderate level of tenure. The largest group, 35%, has 10 to 15 years of experience, suggesting a significant portion of professionals with considerable industry experience. Finally, 26% of the participants have over 15 years of experience, representing a segment expertise long-term involvement in their roles.

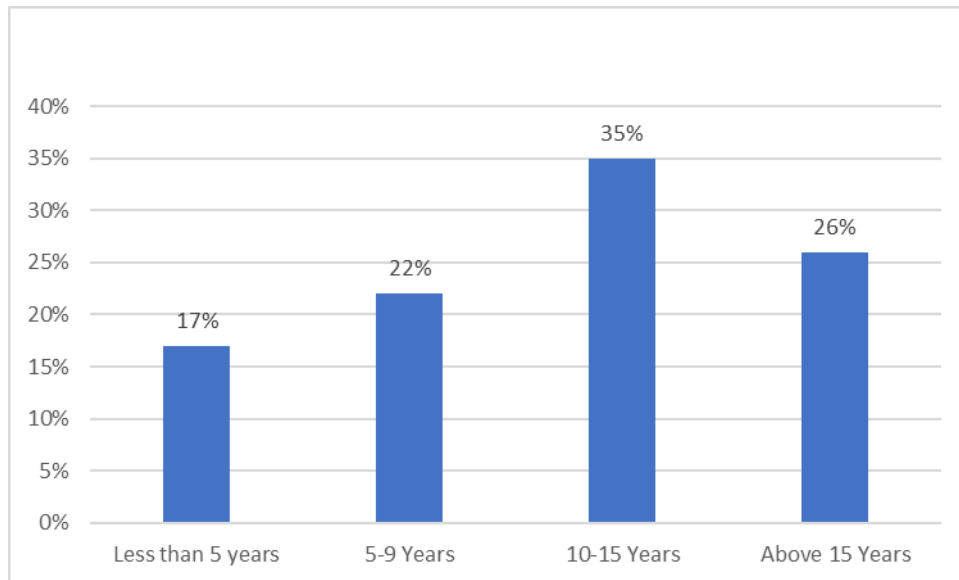


Figure 5: Work Experience

4.4 Descriptive Findings and Discussions

Section 4.4 presents the descriptive findings and discussions related to the study's objectives. This section includes an overview of the results, which are analysed using central tendency measures (means) and measures of variation or dispersion (standard deviations). The data analysis was conducted using a five-point Likert scale where 1 represents "Strongly Disagree," 2 denotes "Disagree," 3 indicates "Undecided," 4 means "Agree," and 5 signifies "Strongly Agree."

4.4.1 Statements relating to Electronic Communication Tools on Project Performance

The respondents were asked to indicate whether electronic communication tools affected project performance in Nakuru law courts. The results are indicated by Table 5.

Table 5: Statements relating to Electronic Communication Tools on Project Performance

N Min Max Mean Std. Dev.

Electronic communication tools improve the efficiency of our project management processes	49	1	5	3.89	.973
We frequently use electronic communication tools for project updates.	49	2	5	3.81	.753
Electronic communication tools reduce misunderstandings and errors in communication	49	2	5	4.84	.752
I am satisfied with the electronic communication tools we use for our projects	49	1	5	4.45	.914
Electronic communication tools enhance collaboration among project team members	49	1	5	3.74	.981

Source: Survey Data (2024)

The findings revealed that the majority of respondents strongly agreed that electronic communication tools are highly effective in reducing misunderstandings and errors in communication, with this perception reflected in the highest mean score of 4.84 and a standard deviation of 0.752. This indicates a strong consensus on the positive impact of these tools in improving clarity and accuracy. Additionally, respondents expressed a high level of satisfaction with the electronic communication tools used in their projects, as evidenced by a mean score of 4.45 and a standard deviation of 0.914. This result shows a general contentment with the tools, although there is some variability in individual satisfaction levels.

Moreover, the findings revealed that electronic communication tools are perceived to enhance the efficiency of project management processes, with a mean score of 3.89 and a standard deviation of 0.973. This suggests that while the majority of respondents view these tools as beneficial for streamlining project management, there is some degree of variability in their perceived effectiveness. The frequency of use of these tools for project updates also received a positive response, with a mean score of 3.81 and a standard deviation of 0.753, indicating that they are regularly utilized but with some differences in

how often they are employed by respondents. Finally, the study found that respondents generally agreed that electronic communication tools contribute to improved collaboration among project team members, as indicated by a mean score of 3.74 and a standard deviation of 0.981. This suggests that while the tools are seen as beneficial for fostering collaboration, there is a range of opinions regarding the extent of their impact. Overall, the findings illustrate a predominantly positive view of electronic communication tools, with notable variation in how their benefits are experienced and perceived. The findings are in agreement with Lee and Chang (2020), who argued that the use of email, instant messaging, and video conferencing significantly improved project coordination, reduced misunderstandings, and facilitated real-time problemsolving. However, a notable gap in this study was the lack of focus on specific sectors such as the judiciary, which has unique communication and documentation needs.

4.4.2 Statements on Cost Tracking Tools on Project Performance

In addition, the respondents were asked to indicate whether Cost Tracking Tools affected project performance in Nakuru Law courts. The results are indicated by Table 6.

Table 6: Cost Tracking Tools on Project Performance

	N	Min	Max	Mean	Std. Dev.
We regularly use cost tracking tools to monitor project expenses	49	1	5	4.11	.943

Cost tracking tools improve our financial reporting accuracy	49	2	5	4.41	.821
in our organization Cost tracking tools help in identifying potential cost overruns early	49	1	5	3.17	.862
The use of cost tracking tools ensures that project costs are transparent	49	3	5	4.43	.714
Cost tracking tools help us achieve better financial control over our projects	49	2	5	4.91	.724

Source: Survey Data (2024)

The study as shown in Table 6 revealed that the majority of respondents strongly agreed that cost tracking tools significantly improve financial reporting accuracy within their organization. This is reflected in a mean score of 4.41 and a standard deviation of 0.821, indicating a high level of agreement with minimal variation in responses. Additionally, respondents viewed cost tracking tools as crucial for ensuring transparency in project costs, with a mean score of 4.43 and a standard deviation of 0.714, highlighting a strong consensus on the tools' effectiveness in maintaining cost visibility. However, the findings also reveal that while cost tracking tools are regularly used to monitor project expenses, as indicated by a mean score of 4.11 and a standard deviation of 0.943, there is a notable range in how frequently they are employed. The tools are also perceived as very effective in achieving better financial control over projects, evidenced by the highest mean score of 4.91 and a standard deviation of 0.724, reflecting a strong agreement on their role in financial management.

Conversely, cost tracking tools are somewhat less effective in identifying potential cost overruns early, as shown by a mean score of 3.17 and a standard deviation of 0.862. This suggests that while the tools are valuable for many aspects of financial control, there is some variability in their effectiveness for early detection of cost overruns. Overall, the results demonstrate a positive view of cost tracking tools' contributions to financial

accuracy, transparency, and control, with some variation in their perceived effectiveness in different areas. The findings concur with Kamau (2021) that the implementation of cost tracking tools led to better financial oversight and accountability, helping projects stay within budget. Nanda (2017) also argued that technology introduces a novel area of interest for practitioners, particularly emphasizing the benefits of real-time feedback and results. Integrating new technologies into Monitoring and Evaluation (M&E) processes has demonstrated advantages such as cost reduction, improved accuracy, and the acquisition of high-quality data, leading to a deeper understanding of project dynamics.

4.4.3 Statements relating to Time Tracking Tools on Project Performance

Furthermore, the respondents were asked to indicate whether Time Tracking Tools affected project performance in Nakuru law courts. The results are indicated by Table 7.

Table 7: Time Tracking Tools on Project Performance

	N	Min.	Max.	Mean	Std. Dev.
Time tracking tools help us complete projects on time	49	1	5	4.67	.813
We frequently use time tracking tools to monitor project progress	49	1	5	3.12	.972
Time tracking tools provide accurate reporting of project timelines.	49	2	5	4.97	.724

Time tracking tools help in identifying and addressing project delays	49	1	5	3.41	.823
The use of time tracking tools improves resource allocation	49	1	5	4.33	.801

Source: Survey Data (2024)

The descriptive statistics for the use of time tracking tools on project performance reveal several key insights. Respondents overwhelmingly agreed that time tracking tools significantly aid in completing projects on time, as evidenced by a high mean score of 4.67 and a standard deviation of 0.813. This indicates a strong consensus on the effectiveness of these tools in ensuring timely project completion, with relatively little variation in responses. Similarly, respondents rated the accuracy of reporting provided by time tracking tools very highly, with the highest mean score of 4.97 and a standard deviation of 0.724, suggesting that these tools are perceived as reliable in tracking project timelines. However, the findings show some variation in the regularity of using time tracking tools to monitor project progress. With a mean score of 3.12 and a standard deviation of 0.972, the data suggests that while these tools are utilized, their usage frequency varies among respondents. Time tracking tools are also seen as moderately effective in identifying and addressing project delays, with a mean score of 3.41 and a standard deviation of 0.823. This indicates that while they play a role in delay management, there is a wider range of opinions on how well they fulfill this function.

Additionally, the findings reveal that respondents generally agree that the use of time tracking tools improves resource allocation, as reflected in a mean score of 4.33 and a standard deviation of 0.801. This suggests that these tools are considered valuable for optimizing resource distribution throughout project lifecycles.

Overall, the data indicates a positive perception of time tracking tools' role in enhancing project performance, particularly in terms of timely completion and accurate timeline

reporting, though there is some variability in their perceived utility for monitoring progress and managing delays. Ogunberu, Akintelu, and Olaposi (2021) identified key success criteria in project time management, including customer satisfaction, customer expectations, project costing, project quality, and project duration according to the study satisfactory project success criteria with the implementation of time tracking tools in project management practices. Mbutu, Ngugi, and Ombui (2022) found a positive and significant correlation between time schedule definition and project performance.

4.4.4 Quality Assurance Tools and Project Management Performance

Additionally, the respondents were asked to indicate whether quality assurance tools affected project performance in Nakuru law courts. The results are indicated by Table 8.

Table 8: Quality Assurance Tools and Project Management Performance

	N	Min.	Max.	Mean	Std. Dev.
Quality assurance tools help us maintain high standards in our projects	49	1	5	3.67	.887
We regularly use quality assurance tools to monitor project quality	49	2	5	3.79	.921
Quality assurance tools improve our compliance with project requirements	49	1	5	3.46	.837
Quality assurance tools help in identifying and correcting defects early	49	1	5	4.21	.912

The use of quality assurance tools ensures that project deliverables meet specifications	49	1	5	4.77	.861
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Source: Survey Data (2024)

The descriptive statistics for the use of quality assurance tools in project management performance highlight several important aspects. Respondents largely agreed that these tools are effective in ensuring that project deliverables meet specifications, as indicated by a high mean score of 4.77 and a standard deviation of 0.861. This suggests a strong consensus on the role of quality assurance tools in achieving project deliverables that align with set standards, although there is some variation in the level of agreement. Furthermore, the majority of respondents believed that quality assurance tools are instrumental in identifying and correcting defects early in the project lifecycle, reflected in a mean score of 4.21 and a standard deviation of 0.912. This indicates that respondents generally view these tools as proactive measures for quality control, minimizing potential issues before they escalate. However, when it comes to improving compliance with project requirements, the mean score was 3.46 with a standard deviation of 0.837, suggesting a more moderate agreement and a wider range of opinions regarding the tools' effectiveness in this area.

Regular use of quality assurance tools to monitor project quality was also reported, with a mean score of 3.79 and a standard deviation of 0.921. This points to a fairly consistent application of these tools for quality monitoring, though there is some variability in their use. The perception that quality assurance tools help maintain high standards in projects received a mean score of 3.67 and a standard deviation of 0.887, indicating a generally positive view, but with a more diverse range of responses. Overall, the findings suggest that while quality assurance tools are generally seen as valuable in ensuring deliverable specifications and early defect detection, there is moderate to varied agreement on their

role in maintaining high project standards and compliance with project requirements. The findings are in agreement with Mwangi and Njiru (2022) who revealed that the implementation of quality assurance tools significantly improved project outcomes, with higher stakeholder satisfaction and fewer project revisions. Kerzner (2021) also found that the use of quality assurance tools led to higher project success rates by ensuring compliance with quality standards and reducing rework.

4.4.4 Project Management Performance

The study sought views of project performance in Nakuru law courts. The results are indicated by Table 9.

Table 9: Project Performance

	N	Min.	Max.	Mean	Std. Dev.
Our projects consistently meet their deadlines	49	3	5	4.12	.756
Project deliverables consistently meet the expected quality standards	49	2	5	3.78	.972
We effectively manage project costs to stay within budget	49	2	5	4.43	.971
Our project management processes are efficient and well-organized	49	2	5	3.84	.852
Project team members collaborate effectively to achieve project goals	49	3	5	3.83	.857

Source: Survey Data (2024)

The descriptive statistics for project performance reveal several key insights into how projects are managed and executed. A notable majority of respondents indicated that their projects consistently meet deadlines, with a mean score of 4.12 and a standard deviation of 0.756. This high level of agreement suggests that timely completion is a strong aspect of their project management, with relatively little variation in responses, implying consistency across different projects. In terms of cost management, respondents largely agreed that they effectively manage project costs to stay within budget, as shown by a mean score of 4.43 and a standard deviation of 0.971. This reflects a strong consensus on the ability to control costs efficiently, although there is some degree of variability in experiences. However, when it comes to meeting quality standards, the mean score was 3.78 with a standard deviation of 0.972, indicating a slightly more varied perception. While respondents generally agreed that project deliverables meet the expected quality standards, the wider range of responses suggests that maintaining consistent quality may sometimes be challenging. Regarding the efficiency and organization of project management processes, the mean score of 3.84 and a standard deviation of 0.852 reflect a positive view, suggesting that respondents find their processes to be fairly wellstructured and effective.

Similarly, the effectiveness of team collaboration to achieve project goals was rated with a mean of 3.83 and a standard deviation of 0.857. This indicates that while team collaboration is generally considered effective, there is a moderate range of opinions, pointing to some variability in team dynamics and performance. Overall, the findings depict a generally positive outlook on project performance, especially in terms of meeting deadlines and managing costs. However, there is a slightly more diverse perspective on aspects like maintaining quality standards, process efficiency, and team collaboration, indicating areas where performance might vary across different projects. The study reveals positive perceptions of process efficiency and team collaboration, which is supported by

empirical literature emphasizing the importance of these factors in project success. The Project Management Institute (PMI, 2017) highlights that efficient project management processes lead to more organized and successful project outcomes. This is corroborated by Turner and Müller (2015), who found that well-defined project management processes enhance coordination and reduce inefficiencies. Additionally, the importance of team collaboration is echoed in studies by Doolen et al. (2023), which found that effective communication and teamwork are critical to project success, although they can be influenced by team dynamics and organizational culture.

4.5 Correlation Analysis

The researcher undertook correlation analysis to establish the nature and strength of the relationships between Information Technology Tools and Performance of The Judiciary Projects in Nakuru Law Courts Kenya.

4.5.1 Electronic Communication Tools and Project Management Performance

The study sought to establish the correlation between Electronic Communication Tools and Project Management Performance. The results of the study are as shown in Table 10.

Table 10: Correlation Between Electronic Communication Tools and Project Performance

		Project Performance
Electronic Communication Tools	Pearson Correlation	.518*
	Sig. (2-tailed)	.011
	N	49

*. Correlation is significant at the 0.05 level (2-tailed). **Source:**

Survey Data (2024)

As indicated in Table 10, the correlational analysis shows a moderate positive relationship between the use of electronic communication tools and project performance, with a Pearson correlation coefficient of 0.518. This suggests that as the utilization of electronic

communication tools increases, project performance also improves. The correlation is statistically significant, with a p-value of 0.011, indicating that the relationship is unlikely to be due to chance. This finding implies that electronic communication tools can significantly enhance project performance by facilitating better coordination, reducing misunderstandings, and improving overall project management processes. Ahmad et al. (2022) observed that successful project managers demonstrate proficiency in communication, emphasizing its importance as a people competency. The study's findings align with previous research, confirming that electronic communications tools play a pivotal role in project success within make-to-order manufacturing contexts

4.5.2 Cost Tracking Tools and Project Management Performance

Secondly, the researcher sought to establish correlation between Cost Tracking Tools and Project Management Performance. The findings of the study are as shown in Table 11.

Table 11: Correlation between Cost Tracking Tools and Project Management Performance

		Project Performance
Cost Tracking Tools	Pearson Correlation	.563*
	Sig. (2-tailed)	.014
	N	49

*. Correlation is significant at the 0.05 level (2-tailed).

Source: Survey Data (2024)

The correlational results in Table 11 reveal a positive relationship between the use of cost tracking tools and project management performance, with a Pearson correlation coefficient of 0.563. This indicates a moderate to strong positive correlation, suggesting that an increase in the use of cost tracking tools is associated with improved project management performance. The correlation is statistically significant, as evidenced by a p-value of 0.014,

which is below the 0.05 threshold, confirming that the observed relationship is unlikely to have occurred by chance. This finding implies that the effective use of cost tracking tools can significantly enhance project management performance by improving cost control, budget adherence, and overall financial management within projects. The findings are in agreement with Smith and Brown (2021) who indicated that sophisticated cost tracking tools, such as budget software and financial dashboards, significantly reduced cost overruns and improved budget adherence

4.5.3 Time Tracking Tools and Project Management Performance

The study examined the correlation between Time Tracking Tools and Project Management Performance. The results of the correlation analysis are as shown in Table 12.

Table 12: Correlation between Time Tracking Tools and Project Management Performance

		Project Performance
Time Tracking Tools	Pearson Correlation	.449*
	Sig. (2-tailed)	.021
	N	49

*. Correlation is significant at the 0.05 level (2-tailed).

Source: Survey Data (2024)

The correlation results in Table 12 show a positive relationship between the use of time tracking tools and project management performance, with a Pearson correlation coefficient of 0.449. This indicates a moderate positive correlation, suggesting that higher utilization of time tracking tools is associated with better project management performance. The correlation is statistically significant, as evidenced by a p-value of 0.021, which is below the 0.05 threshold. This significance indicates that the observed correlation is unlikely to be due to random chance. The results imply that time tracking tools play a beneficial role

in enhancing project management performance by improving time management, scheduling accuracy, and overall project efficiency. These findings were consistent with previous studies by Aborhor and Baiden (2021) and Kim and Ryu (2019) who concluded that effective time tracking tool management is crucial for project success in Make-to-Order Organizations

4.5.4 Quality Assurance Tools and Project Management Performance

The study examined the correlation between Quality Assurance Tools and Project Management Performance. The results of the correlation analysis are as shown in Table 13.

Table 13: Correlation between Quality Assurance Tools and Project Management Performance

		Project Performance
Quality Assurance Tools	Pearson Correlation	.586*
	Sig. (2-tailed)	.017
	N	49

*. Correlation is significant at the 0.05 level (2-tailed).

Source: Survey Data (2024)

The correlation results presented in Table 13 demonstrate a strong positive relationship between the use of quality assurance tools and project management performance, with a Pearson correlation coefficient of 0.586. This suggests a robust positive correlation, indicating that increased use of quality assurance tools is associated with enhanced project management performance. The correlation is statistically significant, as the p-value of 0.017 is below the 0.05 threshold, confirming that this relationship is unlikely to be due to random chance. These results imply that quality assurance tools significantly contribute to improved project management outcomes by ensuring higher standards, better compliance with project requirements, and more effective defect identification and

correction. Ngari and Ndiritu (2019) suggested that utilizing software to generate highquality project information enables project managers to execute their tasks professionally, thereby increasing the likelihood of project success. The study emphasized that the effectiveness of systems lies not in its complexity but in the relevance of the generated information and the user's ability to leverage it for project management. It recommended the adoption of quality management software by youth polytechnics for project management purposes.

4.6 Regression Analysis

The study ascertained the effect of electronic communication tools, cost tracking tools, time tracking tools, and quality assurance tools on Project Management Performance.

The results in relation to the foregoing are illustrated in Tables 14.

Table 14: Model Summary

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.681 ^a	.463	.458	.62786

a. Predictors: (Constant), electronic communication tools, cost tracking tools, time tracking tools and quality assurance tools

Source: Survey Data (2024)

Table 14 presents the model summary for a regression analysis examining the impact of various tools on project management performance. The correlation coefficient (R) is 0.681, indicating a strong positive relationship between the predictors—electronic communication tools, cost tracking tools, time tracking tools, and quality assurance tools—and project management performance. The R Square value is 0.463, suggesting that approximately 46.3% of the variability in project management performance can be explained by these predictors. The Adjusted R Square value of 0.458 accounts for the

number of predictors in the model, providing a slightly adjusted measure of the explained variance. The standard error of the estimate is 0.62786, which represents the average distance that the observed values fall from the regression line. Overall, the results indicate that the combined use of these tools has a significant impact on project management performance, explaining a substantial portion of its variability.

Table 15: ANOVA Results

		ANOVA ^a				
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.546	4	.887	9.337	.000 ^b
	Residual	4.387	44	.095		
	Total	7.934	48			

a. Dependent Variable: Project Management Performance

b. Predictors: (Constant), electronic communication tools, cost tracking tools, time tracking tools, and quality assurance tools

Source: Survey Data (2024)

The ANOVA table shows a F-statistic of 9.337 with a p-value of 0.000, indicating that the overall regression model is statistically significant. This means that the predictors collectively explain a significant portion of the variance in project management performance. The Sum of Squares for Regression is 3.546, while the Sum of Squares for Residuals is 4.387, with the total sum of squares being 7.934. The Mean Square for the regression is 0.887, calculated by dividing the sum of squares for regression by its degrees of freedom ($df = 4$), and the Mean Square for residuals is 0.095, derived from dividing the sum of squares for residuals by its degrees of freedom ($df = 44$). These values are used to compute the F-statistic, which is the ratio of the regression mean square to the residual mean square. Overall, the ANOVA results confirm that the regression model, which includes the various tools as predictors, significantly contributes to explaining variations

in project management performance, with the model's significance level far exceeding the conventional threshold of 0.05.

Table 16: Regression Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	Beta	Std. Error	Beta		
	(Constant)	1.082	.127	8.529	.000
	Communication Tools	.314	.033	.433	9.515 .000
	Cost tracking Tools	.159	.042	.220	3.786 .000
1	Time tracking Tools	.313	.033	.432	9.485 .000
	Quality Assurance Tools	.225	.040	.304	5.625 .000

a. Dependent Variable: Project Management Performance

Source: Survey Data (2024)

The study also conducted a regression analysis to establish the regression coefficients connecting the independent and dependent variables as illustrated by the equation illustrated below:

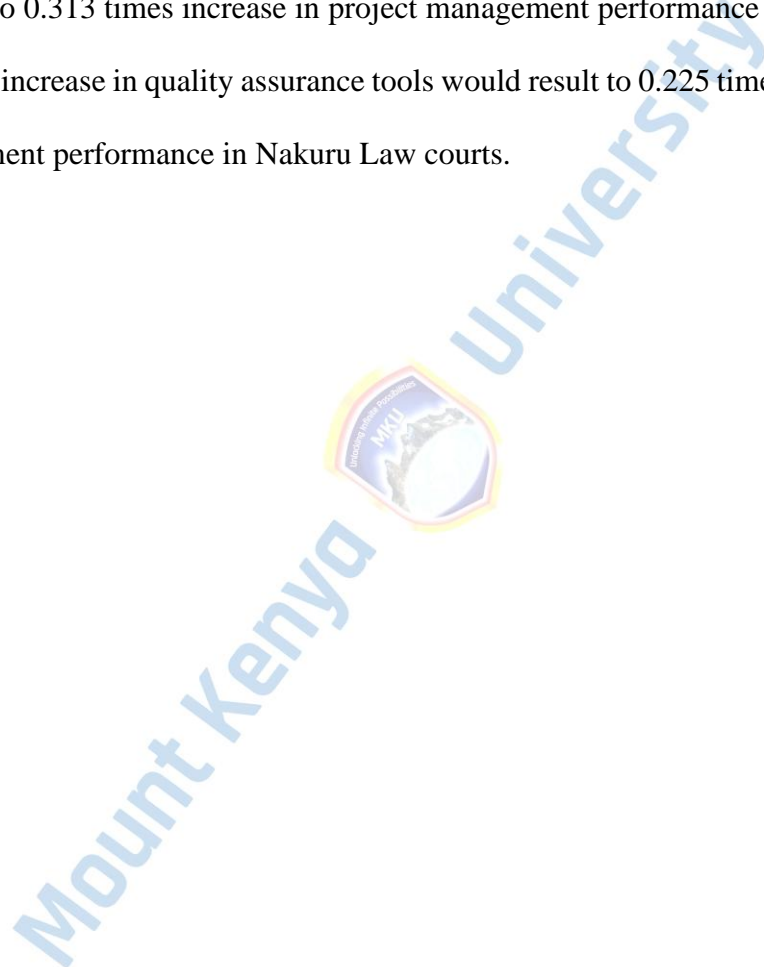
$$Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \varepsilon$$

Whereby Y represents project management performance. X₁ represents electronic communication tools, X₂ represents cost tracking tools, X₃ represents time tracking tools and X₄ represents quality assurance tools. β₀ represents Constant which defines the value of project management performance without the inclusion of predictor variables. From the results in Table 16 the given equation was answered by the values of Unstandardized Coefficients (β). The results indicate that electronic communication tools, cost tracking tools, time tracking tools, and quality assurance tools have a positive relationship with project management performance in Nakuru Law courts Thus,

$$Y = 1.082 + 0.314X_1 + 0.159X_2 + 0.313X_3 + 0.225X_4 + \varepsilon$$

The value of project management performance in Nakuru Law courts without the

influence of the predictor variables is 1.082. This explains that, at any given time, project management performance in Nakuru Law courts will be 1.082 holding other factors constant at 0. The results also illustrate that, a unit change in electronic communication tools would result to 0.314 times change in project management performance in Nakuru Law courts, a unit increase in cost tracking tools would result to 0.159 times increase in project management performance in Nakuru Law courts, a unit increase in time tracking tools would result to 0.313 times increase in project management performance in Nakuru Law courts, a unit increase in quality assurance tools would result to 0.225 times increase in project management performance in Nakuru Law courts.



CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter provides an overview of the key findings from the study, covering both descriptive and inferential results. It begins with a summary of the main discoveries, followed by the conclusions drawn from these findings. The chapter then offers

recommendations based on the results. Lastly, it identifies potential areas for future research to explore further.

5.2 Summary of the Study

The major study findings are summarized in this section. It outlines the summary of the findings in line with the objectives of the study.

5.2.1 Electronic Communication Tools and Project Management Performance

The findings reveal a strong positive perception of electronic communication tools in enhancing project performance. Respondents overwhelmingly agreed that these tools are highly effective in reducing misunderstandings and errors in communication, with a notable mean score of 4.84. This reflects a robust consensus on their role in improving clarity and accuracy in project communication. Satisfaction with the electronic communication tools also received a high mean score of 4.45, indicating general contentment among users, though there is some variability in individual experiences. Additionally, while electronic communication tools are seen as beneficial for enhancing the efficiency of project management processes, as indicated by a mean score of 3.89, there is some variation in how effectively they are perceived to streamline these processes. The tools are regularly used for project updates, with a mean score of 3.81, suggesting consistent utilization but with differing frequencies among respondents. The impact of these tools on collaboration within project teams received a mean score of 3.74, showing general agreement on their effectiveness in fostering team collaboration, although opinions vary on the extent of this benefit.

5.2.2 Cost Tracking Tools on Project Performance

Cost tracking tools are viewed positively for their contribution to financial management in projects. Respondents strongly agreed that these tools significantly improve financial

reporting accuracy, evidenced by a mean score of 4.41, indicating a high level of consensus and minimal variation in responses. Similarly, cost tracking tools are considered crucial for ensuring transparency in project costs, with a mean score of 4.43, reflecting strong agreement on their role in maintaining cost visibility. The regular use of these tools to monitor project expenses received a mean score of 4.11, highlighting their frequent application, though there is some variability in usage frequency. The effectiveness of cost tracking tools in achieving better financial control over projects is particularly emphasized, with the highest mean score of 4.91, demonstrating a strong agreement on their impact on financial management. However, there is a noted limitation in their effectiveness for early identification of cost overruns, with a mean score of 3.17, suggesting that while valuable, these tools may have limitations in proactively addressing potential cost overruns.

5.2.3 Time Tracking Tools on Project Performance

Time tracking tools are highly regarded for their role in ensuring timely project completion, with a mean score of 4.67 indicating strong agreement on their effectiveness. This suggests that these tools are widely recognized for their contribution to meeting project deadlines. The accuracy of reporting provided by time tracking tools is also highly rated, with the highest mean score of 4.97, reflecting their reliability in tracking project timelines. However, there is some variability in how frequently these tools are used to monitor project progress, as shown by a mean score of 3.12, indicating that their usage frequency varies among respondents. Time tracking tools are viewed as moderately effective in identifying and addressing project delays, with a mean score of 3.41, suggesting that while they contribute to delay management, opinions on their effectiveness in this area vary. Additionally, respondents generally agree that time tracking tools improve resource allocation, with a mean score of 4.33, highlighting their value in optimizing resource distribution throughout project lifecycles.

5.2.4 Quality Assurance Tools on Project Management Performance

Quality assurance tools are generally seen as effective in ensuring project deliverables meet specifications, with a high mean score of 4.77 reflecting strong agreement on their role in achieving project standards. These tools are also viewed as instrumental in identifying and correcting defects early in the project lifecycle, evidenced by a mean score of 4.21, indicating their effectiveness in proactive quality control. However, when it comes to improving compliance with project requirements, there is a more moderate agreement, as reflected in a mean score of 3.46, suggesting a wider range of opinions on the tools' effectiveness in this area. The regular use of quality assurance tools to monitor project quality is reported with a mean score of 3.79, indicating consistent application but with some variability. Overall, the perception that quality assurance tools help maintain high project standards received a mean score of 3.67, demonstrating a generally positive view but with diverse opinions on their role in upholding quality and compliance.

5.3 Conclusions

The study drew conclusions in respect of electronic communication tools, cost tracking tools, time tracking tools, and quality assurance tools on performance of judiciary projects in Nakuru law courts, Kenya.

5.3.1 Electronic Communication Tools on Project Performance

Electronic communication tools are widely recognized for their effectiveness in reducing misunderstandings and errors, with a high degree of satisfaction among respondents. They significantly enhance project clarity, accuracy, and efficiency. However, while these tools are regularly utilized and seen as beneficial for collaboration, there is variability in how frequently and effectively they are used. Overall, the findings support the value of electronic communication tools in improving project management, though their impact on certain aspects, like collaboration, may vary among users.

5.3.2 Cost Tracking Tools on Project Performance

Cost tracking tools are highly valued for their role in improving financial reporting accuracy, ensuring transparency, and achieving better financial control within projects. The strong consensus on their effectiveness underscores their importance in financial management. However, their effectiveness in early detection of cost overruns is less pronounced, suggesting that while they excel in many aspects of financial oversight, there are areas for improvement. Overall, cost tracking tools are crucial for managing project costs but may need additional features or strategies to enhance their capability in preventing cost overruns.

5.3.3 Time Tracking Tools on Project Performance

Time tracking tools are considered essential for ensuring timely project completion and providing accurate timeline reporting. Their effectiveness in improving resource allocation is also well-regarded. Despite this, there is notable variability in how frequently these tools are used and their perceived effectiveness in managing project delays. This indicates that while time tracking tools contribute significantly to project management, their use and effectiveness can differ among projects and users. Enhancing the consistency of their application and addressing their limitations in delay management could further improve their impact on project performance.

5.3.4 Quality Assurance Tools on Project Management Performance

Quality assurance tools are generally effective in ensuring that project deliverables meet specifications and in identifying defects early in the project lifecycle. They are valued for their role in quality control and maintaining high standards. However, there is a more moderate level of agreement on their effectiveness in improving compliance with project requirements, suggesting that their impact in this area may vary. While quality assurance tools are important for maintaining project quality, there is room for improvement in their

application to ensure consistent compliance with requirements. Overall, they are seen as a valuable asset in achieving project success, though their effectiveness can be enhanced by addressing identified limitations.

5.4 Recommendations

Based on the findings related electronic communication tools, cost tracking tools, time tracking tools, and quality assurance tools on performance of judiciary projects in Nakuru law courts, Kenya., the following recommendations are proposed for policymakers:

5.4.1 Electronic Communication Tools on Project Performance

- i. Enhance Training and Support: To maximize the effectiveness of electronic communication tools, organizations should invest in training programs to ensure all team members are proficient in using these tools. This can help minimize variability in their effectiveness and improve overall communication clarity.
- ii. Standardize Usage Practices: Implement standardized practices for using electronic communication tools to ensure consistency across projects.

Establishing guidelines and best practices can help reduce misunderstandings and enhance the tools' impact on project performance.

- iii. Regularly Evaluate Tools: Periodically assess the performance of electronic communication tools and gather feedback from users to identify areas for improvement. This can help address any gaps in functionality and ensure the tools continue to meet project needs effectively.

5.4.2 Cost Tracking Tools on Project Performance

- i. Improve Early Detection Features: To enhance the ability of cost tracking tools to identify potential cost overruns early, consider integrating advanced forecasting

and alert features. This can help project managers take proactive measures to address financial issues before they escalate.

- ii. **Enhance User Training:** Provide comprehensive training for users on how to effectively utilize cost tracking tools. Ensuring that all team members are wellversed in the tools' functionalities can improve their effectiveness in financial management.
- iii. **Regularly Review and Update Tools:** Continuously review and update cost tracking tools to incorporate new features and improvements. This can help maintain their relevance and effectiveness in managing project finances.

5.4.3 Time Tracking Tools on Project Performance

- i. **Increase Tool Utilization:** Encourage more consistent use of time tracking tools across all projects. Implementing policies or practices that promote regular use can help improve their effectiveness in monitoring project progress and managing delays.
- ii. **Enhance Tool Functionality:** Invest in upgrading time tracking tools to include features that better address delay management and progress monitoring. This can help improve their utility in identifying and mitigating project delays.
- iii. **Provide Training on Best Practices:** Offer training sessions on best practices for using time tracking tools. This can help users make the most of the tools' features and improve their effectiveness in managing project timelines and resources.

5.4.4 Quality Assurance Tools on Project Management Performance

- i. **Strengthen Compliance Features:** Enhance quality assurance tools with features that improve compliance with project requirements. This can include more detailed tracking and reporting capabilities to ensure that all quality standards are consistently met.

- ii. **Promote Regular Use:** Encourage regular use of quality assurance tools throughout the project lifecycle. Establishing protocols for their consistent application can help maintain high standards and improve overall project quality.
- iii. **Conduct Regular Reviews:** Regularly review the effectiveness of quality assurance tools and gather feedback from users. This can help identify areas for improvement and ensure that the tools remain effective in addressing quality issues and achieving project goals.

5.5 Suggestions for Further Research

5.5.1 Electronic Communication Tools

Future studies should investigate how different electronic communication tools (e.g., email, instant messaging, video conferencing) influence various aspects of project performance, such as team collaboration, decision-making efficiency, and conflict resolution. This study could help identify which tools are most effective for specific project needs and how their use can be optimized. Also, they can examine the role of training and implementation strategies in enhancing the effectiveness of electronic communication tools. Research could focus on developing and testing best practices for training programs that maximize tool utilization and effectiveness, potentially improving communication clarity and project outcomes. They can also conduct comparative studies across different sectors (e.g., healthcare, construction, IT) to determine how electronic communication tools impact project performance in various contexts. This could provide insights into whether the benefits and challenges of these tools are sector-specific or universally applicable.

5.5.2 Cost Tracking Tools

Scholars can explore the effectiveness of advanced features in cost tracking tools, such as predictive analytics and real-time cost monitoring, in preventing cost overruns and improving financial control. This research could assess how these features contribute to

better financial management and project success. Further they can Study the impact of integrating cost tracking tools with other project management systems (e.g., scheduling, resource management) on overall project performance. This research could reveal how seamless integration affects financial oversight and project outcomes.

5.5.3 Time Tracking Tools

Examine the impact of different usage patterns of time tracking tools on project outcomes. Research could focus on identifying best practices for tool utilization and how adherence to these practices affects project timelines and overall efficiency. Also they can Study the effectiveness of specific features in time tracking tools designed to address project delays. This research could explore how advanced functionalities for delay detection and management contribute to better project performance.

5.5.4 Quality Assurance Tools

Effectiveness of Advanced Quality Assurance Features: Investigate the impact of advanced features in quality assurance tools, such as automated defect detection, predictive quality analytics, and real-time feedback mechanisms. Research could focus on how these features enhance the ability to meet quality standards, identify and correct defects early, and improve overall project outcomes. Understanding how these advanced tools contribute to higher quality deliverables and fewer revisions can provide valuable insights for optimizing quality assurance processes.

Integration with Other Project Management Tools: Study the effects of integrating quality assurance tools with other project management systems, such as project scheduling, resource management, and cost tracking tools. This research could examine how seamless integration influences overall project quality, compliance with requirements, and the efficiency of quality monitoring processes. It could also reveal whether integrated systems provide a more comprehensive approach to quality management.

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APPENDICES

Appendix I: Consent Form

Consent Form For Participation In Research

TITLE OF STUDY

Dear Participant,

I invite you to participate in a research study entitled (Impact of Information Technology Tools on Performance of The Judiciary Projects in Nakuru Law Courts Kenya): I am currently enrolled in the (Master degree in project management and Planning) at Mount Kenya University and am in the process of writing my Master's project. The purpose of the research is to determine: (Impact of Information Technology Tools on Performance of The Judiciary Projects in Nakuru Law Courts Kenya)

The enclosed questionnaire has been designed to collect information on: (specify)

Your participation in this research project is completely voluntary. You may decline altogether, or leave blank any questions you don't wish to answer. There are no known risks to participation beyond those encountered in everyday life. Your responses will remain confidential and anonymous. Data from this research will be kept under lock and key and reported only as a collective combined total. No one other than the researchers will know your individual answers to this questionnaire. There are no direct benefits to you for participating in this research. However, you may find it interesting to talk about the issues addressed in the research and it may be beneficial to the field and to future clients or individuals who have experienced similar concerns

If you agree to participate in this project, please answer the questions on the questionnaire as best you can. It should take approximately *(30 minutes)* to complete. Please return the questionnaire as soon as possible to enable me complete the project report.

If you have any questions about this project, feel free to contact

Mzee Kennedy -0722100292 INVESTIGATOR or; Dr. Ruthwinnie Munene – 0722835443 SUPERVISOR

If you have questions about your rights as a research participant, please be in touch with the Chairman, Mount Kenya University, Ethical Review Committee, P.O Box 34201000, Thika.

Thank you for your assistance in this important endeavor.

CONSENT

I have read and I understand the provided information and have had the opportunity to ask questions. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving a reason and without cost. I understand that I will be given a copy of this consent form. I voluntarily agree to take part in this study.

Participant's signature _____ Date _____

Investigator's signature _____ Date _____



Mount Kenya University

Appendix II: Questionnaire

The purpose of this survey is to establish the Impact of Information Technology Tools on Performance of The Judiciary Projects in Nakuru Law Courts Kenya. Any information gathered will not be deviated to any other use and will be treated with confidentiality.

Section A: Background Information

- a) Gender: Male () Female ()
- b) Age : 18-30 () 31-40 () 41-50 () Above 50 ()
- c) What is your Current Department/occupation?
- d) Highest level of education? K.C.P.E () K.C.S.E () Diploma () Degree () Post graduate ()

Section B: Electronic Communication Tools

Indicate your agreement with the statements asked on electronic communication tools in your Institution . A scale of 1 - 5 is used where 1 implies strongly disagree, 2 means disagree, 3 is Neutral, 4 is agree and 5 implies Strongly agree

	1	2	3	4	5
Electronic communication tools improve the efficiency of our project management processes.					
We frequently use electronic communication tools for project updates.					
Electronic communication tools reduce misunderstandings and errors in communication					
I am satisfied with the electronic communication tools we use for our projects.					
Electronic communication tools enhance collaboration among project team members					

Section C: Cost Tracking Tools

Indicate your agreement with the statements asked on cost tracking tools in your institution . A scale of 1 - 5 is used where 1 implies strongly disagree, 2 means disagree, 3 is Neutral, 4 is agree and 5 implies Strongly agree

	1	2	3	4	5
We regularly use cost tracking tools to monitor project expenses					
Cost tracking tools improve our financial reporting accuracy.					
Cost tracking tools help in identifying potential cost overruns early					
The use of cost tracking tools ensures that project costs are transparent.					
Cost tracking tools help us achieve better financial control over our projects					

Section D: Time Tracking Tools

Indicate your agreement with the statements asked on time tracking tools in your institution. A scale of 1 - 5 is used where 1 implies strongly disagree, 2 means disagree, 3 is Neutral, 4 is agree and 5 implies Strongly agree

	1	2	3	4	5
Time tracking tools help us complete projects on time					
We frequently use time tracking tools to monitor project progress.					
Time tracking tools provide accurate reporting of project timelines.					
Time tracking tools help in identifying and addressing project delays.					
The use of time tracking tools improves resource allocation.					

Section E: Quality Assurance Tools

Indicate your agreement with the statements asked on quality assurance tools in your institution. A scale of 1 - 5 is used where 1 implies strongly disagree, 2 means disagree, 3 is Neutral, 4 is agree and 5 implies Strongly agree

	1	2	3	4	5
Quality assurance tools help us maintain high standards in our projects					

We regularly use quality assurance tools to monitor project quality					
Quality assurance tools improve our compliance with project requirements					
Quality assurance tools help in identifying and correcting defects early.					
The use of quality assurance tools ensures that project deliverables meet specifications					

Section F: Project Management Performance

Indicate your agreement with the statements asked on Project Management Performance in your institution. A scale of 1 - 5 is used where 1 implies strongly disagree, 2 means disagree, 3 is Neutral, 4 is agree and 5 implies Strongly agree

	1	2	3	4	5
Our projects consistently meet their deadlines					
Project deliverables consistently meet the expected quality standards					
We effectively manage project costs to stay within budget.					
Our project management processes are efficient and wellorganized					
Project team members collaborate effectively to achieve project goals.					

Thank You

Appendix III: Ethical Clearance Letter

Mount Kenya University



REF: MKU/ISERC/4228
TO: MZEE KENNEDY OGUMA

Date: 13 August 2024

REG: MSCPM/2022/51872

Dear Sir/Madam,

RE: IMPACT OF INFORMATION TECHNOLOGY TOOLS ON PERFORMANCE OF JUDICIARY PROJECTS IN NAKURU LAW COURTS, KENYA

This is to inform you that **Mount Kenya University** has reviewed and approved your above research proposal. Your application approval number is **3014**. The approval period is **13/08/2024 - 12/08/2025**.

This approval is subject to compliance with the following requirements;

- i. Only approved documents including informed consents, study instruments, MTA will be used
- ii. All changes including amendments, deviations and violations are submitted for review and approval by **Mount Kenya University**
- iii. Death and life-threatening problems and serious adverse events or unexpected adverse events whether related or unrelated to the study must be reported to **Mount Kenya University** within 72 hours of notification
- iv. Any changes, anticipated or otherwise that may increase the risks or affect the safety or welfare of study participants and others or affect the integrity of the research must be reported to **Mount Kenya University** within 72 hours
- v. Clearance for export of biological specimens must be obtained from relevant institutions
- vi. Submission of a request for renewal of approval at least 60 days prior to expiry of the approval period. Attach a comprehensive progress report to support the renewal
- vii. Submission of an executive summary report within 90 days upon completion of the study to **Mount Kenya University**

Prior to commencing your study, you will be expected to obtain a research license from National Commission for Science, Technology and Innovation (NACOSTI) <https://research-portal.nacosti.go.ke> and also obtain other clearances needed.

Yours sincerely,

Dr. Alfred Owino, PhD
Chairman, Mount Kenya University ISERC

Main Campus, General Kago Road, P.O. Box 342-01000 Thika.
Cell: +254 709 153 000 | +254 709 153 200
Email: info@mkun.ac.ke | Web: www.mkun.ac.ke

Appendix IV: Mount Kenya University Research Authorization Letter

Mount Kenya University



DIRECTORATE OF GRADUATE STUDIES

MSCPM/2022/51872

15th August, 2024

National Commission for Science Technology & Innovation (NACOSTI)
Off Waiyaki Way, Upper Kabete,
P.O Box 30623- 00100
NAIROBI, KENYA

Dear Sir/Madam,


RE: MZEE KENNEDY OGUMA- REGISTRATION NO. MSCPM/2022/51872

The purpose of this letter is to introduce the above named student who is pursuing **Master of Science in Project Management** in the **Department of Management** in the school of **Business and Economics**.

The title of the research is **"Impact of Information Technology Tools on Performance of Judiciary Projects in Nakuru Law Courts, Kenya."** It has been cleared by the University's Ethics Review Committee (Certificate attached) and now has to proceed to the field to collect data between **August 2024 and October, 2024**.

Any assistance accorded to the student will be highly appreciated.

Thank you.


Dr. Samuel M. Karanga
Director, Graduate Studies
Enc.

Mount Kenya University
P.O. Box 342-01000, THIKA
Office of the Director,
Graduate Studies

Appendix V: Nakuru Law Courts Research Authorization Letter



THE JUDICIARY
COURT OF APPEAL, NAKURU

18th September, 2024

Mr. Mzee Kennedy Oguma

P O Box 61-20100

Nakuru

Dear Oguma

RE: PERMISSION LETTER TO CONDUCT RESEARCH STUDY AT NAKURU LAW COURTS.

This letter serves to confirm that **Mzee Kennedy Oguma's** request to conduct research on premises of Nakuru Law courts has been approved.

Furthermore, the data collected during the research will only be used to compile the research project analysis. **(The Impact of Information Technology Tools on Performance of Judiciary Projects at Nakuru Law Courts, Kenya).**

The Nakuru Law courts is hereby requested to provide the necessary support during the research process.

On Behalf of Nakuru Law courts, I wish you success in your study.

LINA AKOTH

DEPUTY REGISTRAR,

COURT OF APPEAL – NAKURU



Social Transformation
through Access to Justice

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797407945 | courtofappealnakuru@gmail.com | www.judiciary.go.ke
Justice Be Our Shield and Defender

Appendix VI : NACOSTI Research Permit



REPUBLIC OF KENYA

Ref No: 354180



NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION

Date of Issue: 22/August/2024

RESEARCH LICENSE



This is to Certify that Mr.. MZEE OGUMA KENNEDY of Mount Kenya University, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Nakuru on the topic: IMPACT OF INFORMATION TECHNOLOGY TOOLS ON PERFORMANCE OF JUDICIARY PROJECTS IN NAKURU LAW COURTS, KENYA for the period ending : 22/August/2025.

License No: NACOSTI/P/24/39373

354180

Applicant Identification Number

Walter Mwangi

Director General

NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION

Verification QR Code



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Scan the QR Code using QR scanner application.

See overleaf for conditions

The National Commission for Science, Technology and Innovation, hereafter referred to as the Commission, was the established under the Science, Technology and Innovation Act 2013 (Revised 2014) herein after referred to as the Act. The objective of the Commission shall be to regulate and assure quality in the science, technology and innovation sector and advise the Government in matters related thereto.

CONDITIONS OF THE RESEARCH LICENSE

1. The License is granted subject to provisions of the Constitution of Kenya, the Science, Technology and Innovation Act, and other relevant laws, policies and regulations. Accordingly, the licensee shall adhere to such procedures, standards, code of ethics and guidelines as may be prescribed by regulations made under the Act, or prescribed by provisions of International treaties of which Kenya is a signatory to
2. The research and its related activities as well as outcomes shall be beneficial to the country and shall not in any way;
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 - ii. Adversely affect the lives of Kenyans
 - iii. Be in contravention of Kenya's international obligations including Biological Weapons Convention (BWC), Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO), Chemical, Biological, Radiological and Nuclear (CBRN).
 - iv. Result in exploitation of intellectual property rights of communities in Kenya
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15. Relevant Institutional Scientific and Ethical Review Committee shall monitor and evaluate the research periodically, and make a report of its findings to the Commission for necessary action.

National Commission for Science, Technology and
Innovation(NACOSTI),
Off Waiyaki Way, Upper Kabete,
P. O. Box 30623 - 00100 Nairobi, KENYA
Telephone: 020 4007000, 0713788787, 0735404245
E-mail: dg@nacosti.go.ke
Website: www.nacosti.go.ke

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