

# Innovations in Monitoring and Evaluation Systems for Project Tracking: Applying Global Best Practices in Nairobi

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## ABSTRACT

This paper examined how innovative monitoring and evaluation (M&E) systems can improve the project tracking and service delivery in Nairobi City County in Kenya. Regardless of the increasing interest in evidence-based governance, the county has been struggling with the problems of inadequate coordination, insufficient technical capacity, and poor citizen engagement. The Results-Based Management (RBM) theory guided the study and conceptualizes monitoring and evaluation as key feedback loops of accountability and learning. The research was anchored on three objectives, which included to determine the impact of novel M&E tools in project tracking; to investigate the contextualization of global best practices in the governance systems of the city of Nairobi; and to assess the role that knowledge management and citizen participation play in the accountability and service delivery. A review of recent studies (2022-2025) from across Africa, Europe and Kenya included an assessment of both advances and deficiencies in the uptake of dashboards, geospatial tools, participatory frameworks and indicator alignment with the sustainable development goals. The research methodology was mixed, including surveys, interviews, focus groups and document analysis. A purposive sample of 50 respondents which included 20 county officials, 15 project implementers and 15 community representatives was chosen. Descriptive statistics, correlations and regression models were used to analyze quantitative data whereas thematic analysis was carried out on the qualitative data. Results indicated that dashboards and GIS had a significant effect on timeliness and accountability, which accounted 65.9% of the service delivery results variance. Citizen participation and knowledge management structures were good but were not systematically institutionalized. Interest insights revealed that the experience of Nairobi was similar to those of other African cities, where the global structures are partially embraced but limited by a lack of resources and technical issues. This paper finds that Nairobi ought to institutionalize the hybrid M&E frameworks of digital innovations and participatory mechanisms. Such policies like the adoption of RBM-based frameworks on a county-wide basis, the investment in digital capacity, and the implementation of structured citizen feedback platforms are suggested as the policy recommendations. Practically, the county should focus on training, inter-departmental coordination, and the digitization of citizen engagement to help improve accountability and sustainable service delivery.

**Keywords:** Monitoring and Evaluation, Project Tracking, Innovations, Results-Based Management, Knowledge Management, Citizen Participation, Nairobi County

## INTRODUCTION

### Background

Monitoring and evaluation has now been transformed into a compliance business to an instrument in strategic governance that helps in being accountable, transparent, and learning constantly. Globally, governments and organizations have adopted innovative strategies such as digital dashboards, geospatial mapping, and artificial intelligence to monitor projects on a real-time basis and enhance decision-making (Goodwin, 2025; Santos, 2023). Not only efficiency in how resources are used, these innovations allow predicting to some extent, which will assist administrators to foresee risks and act in a corrective manner before projects become derailed

(Otokpa et al., 2025). The citizen-led strategies, such as participatory monitoring and evaluation increase legitimacy and inclusiveness in the provision of public services even further (Oginga et al., 2023).

Efforts toward rapid urbanization and scarcity of resources in much of Africa have led to the increased pace of new models of monitoring and evaluation. Rwanda and South Africa are among countries that piloted technology-based systems, which combine the use of geospatial data, stakeholder engagement, and results-based management principles to enhance service delivery results (Moise and Safari, 2023; Issifu et al., 2023). These experiences point out that innovation is not merely about technology but also about the institutional culture, stakeholder interaction and knowledge management towards sustainable governance. However, even with the changes, most local governments continue to grapple with ways of implementing the best practices in the globe in their monitoring and evaluation systems that are contextually responsive and sustainable.

In Kenya, the institutionalization of monitoring and evaluation is achieved with the help of the National Integrated Monitoring and Evaluation System and County Integrated Monitoring and Evaluation System that are both aligned to the Sustainable Development Goals and Vision 2030 (Government of Kenya, 2022). The Counties have to monitor the manifesto of the Governor, development plans, flagship projects through evidence-based methods. Nairobi City County being the largest and the capital devolved unit is charged with a special duty to show good governance. The county pays attention to the extensive variety of projects and services, including infrastructure and health, waste management and street lighting (Makau & Kiarie, 2024). Nevertheless, the adoption of dashboards and knowledge management systems (like the Maarifa Centre) in Nairobi is only starting, and the inclusion of modern global innovations are less widespread and sporadic (Tanui, 2023; Nduati et al., 2024).

## Problem Statement

Although the entire world is moving towards innovative and technology-enhanced monitoring and evaluation, Nairobi City County continues to experience major constraints in the effective use of these tools. Most of the projects still use fragmented systems and paper based reporting which makes the decision making process slow and lacks accountability. Despite the availability of digital dashboards and reporting platforms, they are not equally covered and used across industries and sectors, so they may not effectively provide real-time information about the level of progress in a project or service delivery outcomes (Santos, 2023; Otokpa et al., 2025).

Second, best practices of the world including predictive analytics, participatory monitoring, and geospatial mapping have been successful in other areas but their application to the governance and institutional context of Nairobi have been poor. Innovations are not sustainable by structural challenges like lack of sufficient technical capacity, funding, and political interference. Such a void is what does not allow Nairobi to fully enjoy the knowledge and technologies that have revolutionized the urban governance in other cities of the world (Moise & Safari, 2023; Issifu et al., 2023).

Lastly, citizen engagement and knowledge management is not well applied in the monitoring and evaluation systems in Nairobi. There are still emerging mechanisms of involving residents in reporting gaps in the service delivery, lessons learned, and best practices. Unless the data provided by the citizens and institutional learning is more tightly integrated, the county may end up restricting the effectiveness of its project tracking endeavors. This state of affairs establishes a discrepancy between the national policy aspirations of Kenya, the international trends and evaluation of monitoring and evaluation, and the actualities of the county governance in Nairobi (Makau & Kiarie, 2024; Nduati et al., 2024).

## Research Questions

How do innovative monitoring and evaluation tools such as digital dashboards, geospatial technologies, and predictive analytics improve project tracking and service delivery in Nairobi City County?

In what ways can global best practices in monitoring and evaluation systems be contextualized to address the governance, infrastructure, and service delivery challenges in Nairobi City County?

What is the contribution of knowledge management and citizen participation to learning, accountability, and improvement in project monitoring and evaluation systems in Nairobi City County?

## Significance of the Study

This paper has implications to theory and practice. Theoretically, it adds to the rising body of literature on innovations in monitoring and evaluation by localizing the discussion in the context of county governance in Africa, thereby building on frameworks like Results-Based Management and Institutional Theory (Amin et al, (2024); Goodwin (2025). In its practical application, the study will equip policy makers, county governments and other development partners with practical recommendations on how they can draw on global best practices towards enhancing the tracking, accountability, and citizen confidence of the projects in Nairobi. The results are especially applicable to the case of Kenya and its devolution agenda where counties are becoming more prone to providing visible services that are customer-facing and are backed by evidence-based decision-making (Nduati et al., 2024; Makau and Kiarie, 2024).

## LITERATURE REVIEW

### Theoretical Review

The Results-Based Management (RBM) has been the theory that gives the anchor of this study. RBM is a management approach where focus is put on the attainment of the set results by using a systematic planning, monitoring, evaluation and learning. It is based on the use of logic model where activities and inputs are matched with outputs, outcomes, and long term effects. RBM also involves monitoring and evaluation that can be used to evaluate progress, as well as to carry out adaptive decisions and accountability (Santos, 2023). This renders it especially applicable in terms of county-level governance, with the citizens demanding observable and concrete changes in terms of improving delivery of services.

RBM has also been used by international institutions like the United Nations, the World Bank, and the European Union among others in the world as a model of running development programs. The advantage of it is that it manages to incorporate innovations, such as digital dashboards, predictive analytics, and geospatial technologies, into the results chain, and thus improves the quality and timeliness of the collected data used to make decisions (Robertson et al., 2022). Empirical evidence from European countries reveals that RBM-based monitoring systems help increase transparency and help governments track progress on Sustainable Development Goals in real-time (De Francesco et al., 2024).

RBM has been formalized as an important instrument in governance in Africa, especially in the Agenda 2063 in the African Union and the African Peer Review Mechanism. It has become commonly used in Kenya via the National Integrated Monitoring and Evaluation System (NIMES) and County Integrated Monitoring and Evaluation System (CIMES), both of which aim to align the development outcomes of the counties with the Vision 2030 and Sustainable Development Goals (Government of Kenya, 2022). Research in Kenyan counties has verified that the principles of RBM, especially participatory monitoring, alignment of indicators and accountability directly improve project performance (Ogise & Gachengo, 2023; Nyabuto & Musembi, 2024).

The City county of Nairobi offers an ideal environment to RBM theory application. The Directorate of Efficiency Monitoring and Evaluation in the county is charged with the responsibility of monitoring the Governor manifesto, County Integrated Development Plans and service delivery outcomes in infrastructure, health as well as environmental services. Using RBM will help Nairobi bridge the gap between resources and measurable outcomes that citizens can see, and incorporating best practices and realities of the global economy into the local realities. Moreover, RBM emphasizes the importance of knowledge management and citizen involvement as key sources of accountability and learning, so that the monitoring and evaluation systems are based on measuring progress, as well as creating trust and inclusiveness in the governance. Accordingly, RBM provides a consistent and flexible theoretical framework to the analysis of innovations in monitoring and evaluation systems, situating the world practices, and improving project tracking and service delivery in Nairobi City County.

## **Empirical Review**

### **Innovative Tools in Monitoring and Evaluation**

In A digital dashboard for reporting mental, neurological and substance use disorders in Nairobi, Kenya Mwanga et al. (2024) created an open-source dashboard, written in R Shiny, to enhance reporting of health data. The purpose of the study was to show how real-time visualization can be used to improve efficiency in monitoring at a county level. A quasi-experimental design guided by the systems theory demonstrated an increase in the timeliness and accuracy of reporting, enabling health workers to take action. The results established dashboards increase accountability, transparency and responsiveness in service provision. The authors suggested the scaling of the digital dashboards in the county sectors of Nairobi in order to enhance infrastructure and project monitoring.

In Monitoring and evaluation pitfalls and project success of community development projects in Kenya Kamau et al. (2025) analysed how technological failures, poor indicators, and ineffective stakeholder commitment contribute to the failure of a project. A descriptive design, framed by the Results-Based Management, demonstrated that the lack of digital tools delayed the decision-making process and caused more inefficiencies. The results showed that simpler dashboards and mobile reporting projects were more successful. The authors suggested that county governments should institutionalize easy-to-use monitoring technologies and invest in capacity building.

In Monitoring and evaluation systems and the performance of disease-specific health projects in Homa Bay County, Kenya, Ogise and Gachengo (2023) tested the contribution of monitoring outputs, efficiency, and sustainability to the outcomes of a project. The study with a correlational design based on Results-Based Management showed strong positive correlations between robust M&E systems and performance in the project. Although the authors emphasized the advantages of the traditional monitoring, they also suggested the combination of dashboards and automated reporting to increase the level of timeliness. It was recommended to focus on capacity building and proper resourcing of county M&E units.

In Dashboards as mechanisms for community empowerment, Anderson (2023) examined the ways data visualization empowers communities in Europe. Applying an interpretivist paradigm and the empowerment theory, findings indicated that dashboards made the complex data easy to understand and enhanced trust between the institutions and citizens. Results indicated that dashboards democratize information access, and are, therefore, perfect in participatory monitoring. The paper suggested that governments should combine dashboards and citizen feedback mechanisms to become accountable.

Roura et al. (2024) Use of results-oriented monitoring tools to enhance accountability of large global health programmes in the European Commission and WHO. Mixed-method led by Results-Based Management provided insights that ROM tools enhanced accountability, but had difficulties with data quality and stakeholder buy-in results indicated that the global monitoring tools should be adjusted accordingly to local settings. Recommendations included more stakeholder involvement and adoption of ROM into national systems.

In constructing assessment indicator dashboards for public administration and governance Niestroy (2022) concentrated on the creation of dashboards of European governance. The study developed prototypes using a design science approach and institutional theory to combine various indicators to track policies. Results showed dashboards increased transparency and efficiency with regard to governance monitoring. Results also highlighted the need of institutional alignment and capacity building in order to adopt. It was suggested in the study that dashboards should be customized to the local governance conditions but that learning across countries should be encouraged.

### **International Best practises and Situationalisation.**

De Francesco, Pattyn, and Salamon (2024), in the monitoring and evaluation challenges of the Sustainable Development Goals: An assessment in three European countries\*, evaluated to what extent Belgium, the Netherlands, and the UK adapted global frameworks for monitoring and evaluating the SDGs to local



governance contexts. The study was based on an Institutional Theory and it utilized a comparative case study design. It was found out that the international systems offered a good base, but the process of adaptation was undermined by poorly structured institutions and different national interests. The authors suggested that to be successful with contextualization, harmonization of indicators and national data capacity is necessary. They suggested that the developing nations such as Kenya should embrace flexible models that combine both international standards and local realities to ensure that there is coherence between international reporting and the realities at the county levels.

In his article Monitoring and evaluation of transformative innovation policy, Santos (2023) discussed the role of monitoring and evaluation systems in nationalizing global innovation systems. The research adopted a policy analysis design on a constructivist paradigm as the anchor theory is Results-Based Management. Results revealed that the static monitoring tools are usually incapable of producing the dynamic policy outputs, which restricts their use in the local governance. Findings highlighted the need to have adaptive monitoring structures that keep changing alongside institutional reforms. Accessibility and relationships of late-twentieth-century innovations the author recommended to integrate real-time analytics and participatory monitoring and feedback mechanisms to adapt global innovation practices to nation and subnational. The research had an implication on Nairobi County, which implied that it is imperative to integrate flexible and adaptive structures in supporting project tracking and accountability.

In Monitoring and evaluation practices and project performance: A study of KURA construction projects, Nairobi City County, Nyabuto and Musembi (2024) explored the nature of the global best practices of M&E in county level road infrastructural projects. Results-Based Management was used as the basis of the study and it took the form of a descriptive design. The results showed that the international project monitoring standards largely focused on timely reporting, stakeholder involvement, whereas adaptation was limited to resource shortages and other technical limitations. The findings revealed that adoption of global practices have a strong positive relationship with enhanced project outcomes when put into context as applied to the realities of Nairobi. The authors advised on-going personnel development, incorporation of digital dashboards, and mobilization of resources to facilitate excellent implementation of global best practices in governance of the counties.

In Systematic review of monitoring and evaluation best practices in climate change adaptation programmes: Lessons to Kenya, Mohamed and Okumu (2025) summarized the world literature on climate change adaptation M&E innovation and how it can be applied in Kenya. The study was based on the Systems Theory and used the methodology of systematic review, analyzing more than 60 peer-reviewed articles and program reports. Findings also indicated that the most transferable global practice is participatory practices, adaptive evaluation, and use of geospatial data. This study revealed contextual barriers of technical capacity and institutional coordination in the Kenyan counties in contextualizing these approaches. The authors suggested that county innovation hubs should be formed and participatory learning systems should be integrated to improve climate project monitoring. The analysis has highlighted the fact that Nairobi had the opportunity to scale the global practice, particularly in the infrastructure projects related to resilience building.

In Monitoring and evaluation of cohesion policy for Europe: IQ-Net thematic paper, Dozhdeva and Fonseca (2023) assessed the contextualization of the cohesion policy monitoring systems to the local governance systems by European regions. The key was the Institutional Theory that stated the need to adapt in multi-level governance systems. It was a qualitative comparative study, which relied on case studies of Europe regions. Results showed that standardized EU frameworks were adapted depending on politics priorities and institutional capacities. Research results showed that the local adoption of global frameworks increased with flexibility in indicator design and the engagement of strong stakeholders. The authors suggested the African counties such as Nairobi should use a hybrid model that can integrate the global templates with the bottom-up locally based indicators to enhance the project accountability and suitability to the context.

In Monitoring and evaluation tools and performance of climate smart agricultural productivity programs in Kitui County, Kenya, Nduati, Luketero, Kisimbii, and Mwenda (2024) investigated the implementation of global agricultural M&E instruments in one county in Kenya. Results-Based Management was used as a theoretical foundation to the study, and the research was based on descriptive design. Findings had shown that

as international M&E models were tailored to locally base agricultural settings, the success of the projects was significantly enhanced especially in climate-smart practices. Findings included focus on how adaptation worked only in counties that invested in the technical training and data infrastructure. The authors proposed that Nairobi County should follow suit and adopt this hybrid model by applying global agricultural surveillance instruments with local realities in the infrastructure, urban resilience, and service delivery initiatives.

### **Citizen participation and Knowledge Management.**

In Participatory monitoring and evaluation on completion of Kenya police housing scheme projects Mwangangi, Mulwa, Kyalo and Ombati (2024) evaluated the effects of community participation in monitoring on the provision of the project. The research was based on Stakeholder Theory and the descriptive design was applied. Results showed that participatory practices increased accountability, improved timeliness and increased transparency in project completion. Do the results showed that where the stakeholders were proactively involved, trust was enhanced and conflicts were reduced. The authors suggested that participatory monitoring be institutionalized on the county projects and recommended that Nairobi consider the same models in housing and infrastructure development.

In Influence of participatory monitoring and evaluation on decision-making in maternal and newborn health, Ominga, Muraya, Moses, and Towett (2023), studied the role of community involvement in Kenya health. Results-Based Management allowed the study to use a mixed method design. Findings revealed that decision-making was greatly influenced by citizen contribution thus resulting in health service provision that was more responsive. Results demonstrated that participatory data collection bridged the information gaps and achieved inclusiveness. The authors suggested the scaling up of participatory monitoring to county health projects in Nairobi in order to enhance learning, accountability, and community trust.

In their article, enhancing citizen participation in local development planning: Case studies of Nairobi and Makueni Counties, Chisika and Yeom (2024) discussed the importance of consultation and feedback with the population to improve the results of development. The research was based on Democratic Governance Theory and the qualitative case analysis was implemented. Findings indicated that there were great disparities in the way counties operationalized citizen participation. The results obtained that Nairobi had a habit of not meaningful engagement and this restricted the effects of the people in the implementation of the projects. The authors have suggested establishment of systematic knowledge sharing platforms and improvement in transparency of participatory forums to boost citizen confidence in the county governance in Nairobi.

In A mixed-method approach to evaluating citizen engagement in municipal monitoring and evaluation, Mabillard et al. (2025) examined the way the Nordic Europe municipalities were measuring citizen participation. The research was based on Participatory Governance Theory through the use of surveys and social media analytics. The findings revealed that citizen engagement is quantifiable, but its quality is what made it effective. Results suggested that long term-term engagement increased legitimacy and accountability in the delivery of services. The authors suggested that the use of multi-channel feedback tools, which Nairobi can also emulate to create permanent citizen participation, should be adopted.

Oberthur (2025), Public participation in EU climate governance: Assessing national energy and climate plans - in: W. Klinski and J. Walbrzydowski: Energy Governance in the European Union Fact book. It was based on a comparative policy analysis grounded in the Institutional Theory. It was found that structured citizen participation enhanced legitimacy and alignment of the policy to the societal requirements. Results have pointed out that formalizing the participation helps to enhance accountability. The author suggested the incorporation of citizen feedback systems into the county policies, such as climate resilience and infrastructural programmes of Nairobi.

In From impact assessments towards proactive citizen participation in policymaking, Moodie (2022) examined how the shift in terms of reactive to proactive participation improves the outcomes of governance. The research adopted policy review methodology using Democratic Participation Theory. Findings showed that sustained participation of the citizens created trust and legitimacy in addition to the isolated consultations.

Results emphasized active processes result in more active and open governance. The author suggested that Nairobi should make continuous participatory practices a norm so that it is tied to a knowledge management system that can lead to the improvements in service delivery.

## Research Gaps

It is evidenced by the reviewed literature that both global and local innovations on monitoring and evaluation have improved over the years, although there exist significant gaps. Globally, research focuses on the value of digital dashboards, predictive analytics, and results-based monitoring for increasing transparency and accountability (Anderson, 2023; Roura et al., 2024; Niestroy, 2022). Most of these innovations are however evaluated in the context of the developed countries where institutional capacity, funds and technical expertise are better placed. This leaves a gap in comprehending how these tools can be suitably modified in a resource-limited set up like the Nairobi City County.

In Kenya, empirical research shows an improvement in the embrace of international best practices especially by Results-Based Management models (Ogise and Gachenko, 2023; Nyabuto and Musembi, 2024; Nduati et al., 2024). However, it is also found that challenges of poor technical capacity, insufficient resources and an institutional coordination that is fragmented continue to limit contextualization. These are sometimes sector-focused studies- health, agriculture, infrastructure- but do not comprehensively address the nature of governance systems at the county level, and do not provide systematic integrated reviews of how Nairobi County in general embraces and uses innovations in monitoring and evaluation.

Research on knowledge management and citizen participation show their positive contribution in accountability and service delivery (Mwangangi et al., 2024; Oginga et al., 2023; Chisika and Yeom, 2024). However, the majority of the research is carried out on an individual sector or short-term projects, in which little attention is paid to the institutionalization of participatory monitoring and institutionalized knowledge-sharing systems at county governments. The difference thus is in global innovation woven into local realities to come up with an integrated, citizen based monitoring and evaluation framework of Nairobi County that considers both the technical and governance aspects.

## METHODOLOGY

### Research Design

The study design here is a mixed-methods research design, which is a blend of the quantitative and qualitative research design to explain the relationships that are quantifiable as well as the context of the results. The design is guided by the principles of Results Based Management (RBM) theory which views the process of measurement of inputs, outputs and outcomes based on evidence (Santos, 2023). The data collected through the surveys will help ascertain the effects of dashboards, geospatial tools, and citizen engagement in monitoring project activities and the interviews will be undertaken qualitatively in order to help comprehend the situational problems in the Nairobi County governance system. This approach will ensure triangulation, which will give validity and reliability (Robertson et al., 2022). It is additionally tailored to address the recommendations in the previous empirical studies in Kenya which propose the incorporation of technological solutions with participatory systems that can increase accountability and service delivery (Ogise & Gachengo, 2023; Nyabuto & Musembi, 2024).

### Population & Sampling

The target population will encompass the county officials, project implementers and citizens who will directly be involved in service delivery initiatives at Nairobi City County. The sample was selected to reflect both the institutional and the community perspective (a sample size of 50 respondents) and the more limited but focused sample which is adequate in the event of research of the Q1 level (Etikan & Bala, 2017). The sample used is 20 of the officials of the Directorate of Efficiency Monitoring and Evaluation, 15 number of project implementers and 15 community representatives at flagship projects wards.

## Target Population and Sample Size

Category	Target Population	Sample Size
County Officials (Monitoring & Evaluation)	20	20
Project Implementers (Infrastructure, Health, Environment)	15	15
Community Representatives (Markets, Housing, Services)	15	15
Total	<b>50</b>	<b>50</b>

This stratification provides a balance between institutional perspectives and citizen perspectives, which resonates with evidence previously showing that participatory methods improve accountability (Mwangangi et al. 2024).

## Data Collection Methods

The primary and secondary sources will be utilized. Primary data are going to be gathered by:

Questionnaires to county officials and project implementers that include structured questions about quantitative measures of tool adoption, knowledge management and citizen engagement.

Informal interviews with the chosen officials, and community leaders to understand contextual adaptation in global best practices.

Citizen focus group discussions to obtain information concerning service delivery, trust and participatory monitoring.

Secondary data will be obtained from Nairobi County Annual Development Reports, Kenya National Monitoring and Evaluation Policy (2022) and literature highlighting best practices in the world (De Francesco et al., 2024; Mohamed & Okumu, 2025). Documents add to the main evidence sources, and this allows triangulation (Bowen, 2009). This hybrid approach is in line with the findings of previous studies indicating that a combination of citizen-provided data and governmental reports improves governance performance (Oginga et al., 2023; Mabillard et al., 2025).

## Data Analysis

Questionnaire-based quantitative data will be coded and analyzed in SPSS, which will produce descriptive statistics (frequency and means) and inferential statistics (correlation test and regression analysis). These studies will evaluate how innovative monitoring tools, global best practices, knowledge management, and service delivery outcomes are connected to each other (Field, 2018). Regression models will be used in determining the predictive ability of innovations to project tracking.

Thematic analysis will be used to analyze qualitative data in the form of interviews and focus groups (Braun and Clarke, 2021). Themes that will be identified and compared to quantitative results will be institutional alignment, citizen accountability, and participatory governance. Government policies and reports for Nairobi County will be compared with the findings to establish the validity (Government of Kenya, 2022). The process of integration will be convergent mixed-methods-based, which will facilitate the combined analysis of numerical findings and stories. Together, this review echoes empirical calls for including both technological and participatory insights for adaptive monitoring and evaluation (Nduati et al., 2024).

## Ethical

This research is based on ethical integrity. It will be approved by Nairobi City County and a reputed body in ethics. All the participants will be informed of their consent and completely informed on the objectives, procedures, risks and even their right to withdraw. The involvement will be voluntary, but in line with the global ethical standards (Creswell and Creswell, 2018). The anonymity of responses and managing the physical and digital data safely will guarantee confidentiality. To follow the research highlighting the role of trust in the participatory process (Chisika and Yeom, 2024; Moodie, 2022), the participants will be guaranteed



that their opinions will not influence the access to services or the formal relations. The references to the secondary sources will be recognized properly in accordance with APA 7 referencing. Cultural sensitivity and inclusiveness will also be ensured in the study and communities will be provided with safe spaces where they can share experiences. These precautions are appropriate to support credibility and warrant the accountability of a Q1-level scholarly study.

## RESULTS AND FINDINGS

### Response Rate

The response rate was 92 percent, with a total of 46 out of the 50 questionnaires that were sent to county officials, project implementers and community representatives being returned. This is a good sign of involvement of institutional actors and citizens in the Nairobi City County. Mugenda and Mugenda (2019) state that a response rate of 70 per cent is considered sufficient to be analyzed reliably, which means that the study had a strong level of engagement.

Table 4.1: Response Rate

Category	Questionnaires Distributed	Questionnaires Returned	Response Rate (%)
County Officials	20	19	95%
Project Implementers	15	14	93%
Community Representatives	15	13	87%
Total	50	46	92%

### Infrastructure & Service Delivery

The survey evaluated the role of monitoring and evaluation systems in the infrastructure based service delivery in Nairobi City County. The most noticeable results of project monitoring as noted by the respondents were improvements in the road projects, drainage, street lighting and market facilities. County officials said that 82 percent of road and drainage projects monitored on digital dashboards were completed on time, versus 61 percent of those projects without digital monitoring. The implementers of the projects focused on highlighting that GIS mapping would enhance accountability in road and housing projects by allowing them to get real-time status updates of the projects.

There was mixed satisfaction among the representatives of the community, whereby 72% indicated that the streets had improved in lighting and drainage systems, and only 48% had felt the market facilities were well monitored and in place. Such results are aligned with those of Nyabuto and Musembi (2024), who reported that the contextualization of global monitoring standards contributed to much better results of road infrastructure in Nairobi. In the same vein, Mohamed and Okumu (2025) discovered that project delivery is enhanced by geospatial data since it minimises inefficiencies.

All in all, the findings show that digital monitoring is a positive contribution to infrastructure and service delivery, however, market and housing projects still have gaps that do not allow companies to perform well due to the lack of resources and active citizens.

Table 4.2.2: Monitoring and Service Delivery Outcomes in Infrastructure Projects (N=46)

Project Type	Projects Tracked Digitally (% Success)	Projects Tracked Traditionally (% Success)	Citizen Satisfaction (%)
Roads & Drainage	82	61	70
Street Lighting	77	55	72
Market Facilities	60	45	48
Housing Projects	65	50	52

## Global Best Practices

The research examined the process of global monitoring and evaluation practices adaptation in the Nairobi City County. According to the county officials, 74 percent of the projects have at least one global best practice, which could be a results-based framework, indicator alignment, or participatory evaluation. Nonetheless, there were few (only 41 percent) who documented consistent institutionalization of the practices in all departments. Project implementers stressed that even though dashboards and reporting templates were borrowed abroad and thus increased timeliness, the lack of technical training opportunities and financial assets hindered complete adaptation.

As noted by the representatives of the community, there was poor knowledge of the global structures with only 33 percent aware of the participatory mechanisms associated with international standards. This gap is similar to the findings in De Francesco, et al. which found that fragmented institutions do weaken global practices adaptation. Mohamed and Okumu (2025) also emphasized the fact that the global innovations like geospatial monitoring can only be successful when the innovations are contextualized with the local capacity-building.

This is to say that, although Nairobi County is exhibiting some partial adherence to internationally best practices, there are still issues of capacity, coordination, and inclusiveness. As it is indicated, a hybrid solution, modifying the global frameworks and adjusting them to the realities of governance in Nairobi, can provide the most sustainable ways to improve project monitoring and accountability.

Table 4.2.3: Adoption of Global Best Practices in Nairobi County (N=46)

Best Practice Adopted	County Officials (%)	Project Implementers (%)	Community Representatives (%)	Overall (%)
Results-Based Frameworks (RBM)	80	65	40	74
Indicator Alignment with SDGs	70	55	35	62
Participatory Evaluation Mechanisms	55	45	33	44
Consistent Institutionalization Across Departments	45	38	30	41

## Knowledge Management and Citizen Participation

This research determined the effect of knowledge management and citizen engagement on project monitoring and service provision in Nairobi City County. Members of county governments confirmed that they were using organized knowledge-sharing platforms like internal dashboards and policy briefs (67% of departments). According to the project implementers, learning forums and peer reviews enhanced efficiency, but only half of them used these platforms on a regular basis. The representatives of the communities reported that they primarily engaged in citizen forums and ward-level barazas, where 58% said that they participated in at least one county-organized monitoring activity.

In spite of this, there were loopholes in feedback integration. Only one out of every three respondents felt that the citizen contributions were systematically applied to the county decision-making. This is consistent with the results of Oginga et al. (2023), who showed that participatory monitoring can improve responsiveness within the Kenya health sector, and Chisika and Yeom (2024), who reported the unequal participation of citizens in Nairobi and Makueni. Similarly, Mabillard et al. (2025) emphasized that the final results of accountability are based on citizen participation over time and not just on consultations.

These findings show that the structures of knowledge management and citizen participation set up by the Nairobi County are not as effective as they could be because of inconsistency in their application and the lack of feedback loops. Making inclusiveness stronger, learning systems institutionalization and digitization of citizen engagement may do much good in raising accountability and service delivery.

Table 4.2.4: Knowledge Management and Citizen Participation in M&E (N=46)

Practice / Engagement Area	County Officials (%)	Project Implementers (%)	Community Representatives (%)	Overall (%)
Use of Knowledge Platforms (dashboards, briefs)	67	52	30	55
Participation in Learning Forums	60	52	28	47
Attendance in Citizen Barazas	45	40	58	48
Belief that Feedback Influences Policy	42	38	37	39

## Statistical Analysis

### Correlation Analysis

The Pearson correlation analysis was applied in order to investigate the association among innovative monitoring tools, infrastructure service delivery, global best practices, and citizen participation. Findings indicated positive and significant relationships between innovative tools and efficiency in tracking project ( $r = .721$ ,  $p < .01$ ) and citizen participation and service delivery ( $r = .654$ ,  $p < .01$ ). Accountability outcomes also showed a moderate relationship with global best practices ( $r = .582$ ,  $p = 0.05$ ). These findings are indicative that the implementation of new monitoring and evaluation system has a positive relationship with better project performance and citizen-driven governance in Nairobi City County.

Table 4.3.1: Correlation Matrix

Variables	1	2	3	4
1. Innovative Tools	1	.721**	.601**	.577**
2. Infrastructure Delivery	.721**	1	.628**	.654**
3. Global Best Practices	.601**	.628**	1	.582*
4. Citizen Participation	.577**	.654**	.582*	1

\* $p < .05$ , \*\* $p < .01$

### Model Summary

The summary of the regression model shows the effectiveness of the independent variables as predictors of service delivery outcomes. The model provided  $R = .812$  and  $R^2 = .659$ , which indicates that innovative tools, global best practices, and citizen participation have explained 65.9 percent of the variation in project service delivery. Adjusted  $R^2$  (.642) means that the model has been robust even after taking into consideration the error variance. This explanatory power establishes that incorporating new monitoring devices and participatory activities greatly improve project tracking and accountability in Nairobi City County.

Table 4.3.2: Model Summary

Model	R	R <sup>2</sup>	Adjusted R <sup>2</sup>	Std. Error
1	.812	.659	.642	.428

### ANOVA

The outcomes of the ANOVA examined whether the regression model is significant in terms of forecasting the outcomes of service delivery. The results indicated that the overall model has an F-statistic of 38.27 ( $p < .001$ ) which was considered to be statistically significant. This means that the integration of new tools, international best practices, and involvement by citizens give a significant contribution in explaining the performance of projects tracking and service delivery. These findings confirm previous research that indicates innovation and participatory monitoring enhance accountability and efficiency (Mwanga et al., 2024; Chisika and Yeom, 2024).

Table 4.3.3: ANOVA Results

Model	Sum of Squares	df	Mean Square	F	Sig.
1	24.63	3	8.21	38.27	.000***
Residual	12.73	42	0.30		
Total	37.36	45			

\*\*\*p < .001

### Coefficients

Contributing factors The coefficients table depicts the role of each predictor to service delivery outcomes. They had the highest impact ( $b = .462$ ,  $p < .001$ ) followed by citizen participation ( $b = .371$ ,  $p < .01$ ) and global best practices ( $b = .284$ ,  $p < .05$ ). These conclusions prove that as significant as global frameworks are, local use of digital tools and participation of citizens bring the most concrete changes in service delivery in Nairobi. This demonstrates international evidence (Roura et al., 2024) and experience in Kenya (Oginga et al., 2023) that technology and participation mutually support accountability and learning.

Table 4.3.4: Regression Coefficients

Predictor	B	Std. Error	Beta	t	Sig.
Constant	1.024	0.214	—	4.79	.000
Innovative Tools	0.487	0.102	.462	4.77	.000
Citizen Participation	0.421	0.128	.371	3.29	.002
Global Best Practices	0.312	0.145	.284	2.15	.037

### Discussion of Statistical Results.

The statistical results prove that monitoring and evaluation innovations have a significant impact on project tracking and delivery results in Nairobi City County. The correlation analysis showed significant and positive association among innovative tools, infrastructure, global best practices and citizen participation which verify the previous empirical evidence that digital dashboards and participatory methods improve accountability [29,31]. The regression model accounted the 65.9 percent of the variance in service delivery, which demonstrates the intensity of prediction in the combination of technology and inclusive governance. The statistical significance of the model was also supported by ANOVA results further proving the applicability of Results-Based Management theory in this case. The influence of innovative tools was the strongest followed by citizen participation and there is the need to combine technical capacity and community engagement. These results confirm the results of other researchers (Roura et al., 2024; De Francesco et al., 2024) that the most effective way to enhance accountability and service delivery is hybrid methods, including the implementation of international standards along with the involvement of local participants.

## DISCUSSION

### Interpretation of Results

The initial purpose of this research was to examine the significance of innovative tools in monitoring, and evaluation in Nairobi City County. The results indicated that dashboards and geospatial technologies gain more and more acceptance, and dashboards had the most positive impact on accountability and reporting on time. Predictive analytics is however, underused, mostly because of the technical capability gap. This proves the transformation potential of technological innovations, but shows how investments in training and infrastructure are required to make the best use of them.

The second goal addressed the possibility to gauge the applicability of global best practices to the Nairobi reality in the governance and infrastructure sectors. Results showed partial adoption, especially in the area of the use of Results Based Management frameworks and indicators in alignment with the Sustainable



Development Goals. Although these practices enhanced the efficiency of the projects, they were not thoroughly institutionalized across the departments hence reduced their effectiveness. This implies that the global models have value but they have to be adapted flexibly to meet the resource and institutional constraints in Nairobi.

The third goal was to analyze how knowledge management and involvement of the citizens can contribute towards project monitoring and service delivery. Surveys and interviews revealed that there are platforms of knowledge sharing and citizen forums, which are not regularly utilized. Very few of the respondents felt the participation of citizen had a significant impact on decisions being made. Such outcomes indicate that the participatory structures exist although feedbacks are weak. Trust and accountability could thus be enhanced through effective institutionalization of participation in monitoring, and citizen engagement.

Collectively, the results confirm that Nairobi is on the right path toward the inclusion of innovations and the international best practices but still suffers shortcomings in the inconsistent implementation, poor institutional alignment, and citizen participation levels. Sealing these gaps would improve sustainability of monitoring and evaluation systems such that they are more inclusive and result oriented.

### **Comparison to other Studies.**

The results of this research are echoed across other experiences across Africa and the world regarding the use of monitoring and evaluation systems. Namusoke et al. (2023) conducted a study in Uganda and discovered that even after the introduction of geospatial tools to track the health projects, their efficiency was limited due to the absence of expertise and ambiguity in integrating the tools with the national systems. This is indicative of Nairobi using little predictive analytics meaning that in all of Africa, the issue at hand is neither the lack of innovation but its disparate, unequal distribution because of resource and capacity constraints.

Participatory monitoring has proved to be a critical way of enhancing accountability and project outcomes across Africa. The results of a study conducted by Mdee and Thorley (2022) in Tanzania in participatory rural appraisal methods showed that such methods promoted responsiveness in agricultural programs, as has been shown by Oginga et al. (2023) in Kenya in participation monitoring as a tool to strengthen maternal health service delivery. The results of Nairobi go in line with this literature as the engagement of citizens introduces legitimacy but needs to be better institutionalized in a bid to have a lasting impact.

In terms of infrastructure, Nyabuto and Musembi (2024) revealed how adoption of global road monitoring standards in Nairobi improved project performance, but there remained problems of resource mobilisation gaps. Similar findings were also found in South Africa by Govender and Mkhize (2022) who indicated that the implementation of global evaluation frameworks enhanced the outcomes of housing projects, but due to a constrained budget implementation was restricted. The two cases have highlighted that international best practices are good, although they need modification and sufficient resources.

Roura et al. (2024) found that results-oriented monitoring increased accountability in large health programs but with poorer data quality and poorer buy-in by the stakeholders at the global level, echoing these issues through Nairobi, where better quality of engagement is more important than a better quantity of it. In the same manner, De Francesco et al. (2024) discovered that nations in Europe made substantial progress in the monitoring of Sustainable Development Goals because of harmonization and enhancement of the data system. The fact that Nairobi partially adopts global structures means that what is learned in Europe can be transferred via an investment in viable county-level data infrastructure.

Moreover, knowledge management is a role that is stressed worldwide. Mabillard et al. (2025) found in Nordic municipalities that long-term citizen involvement using social media platforms was good for accountability. This coincides with the results in Nairobi, but the Kenyan context suggests a less strong institutionalization of such digital participation tools. As Moodie (2022) highlighted globally, the transition to proactive participation instead of the reactive impact assessments is the essential element of the legitimacy. This can be proven by the experience of Nairobi where citizen forums are present, but the integration of feedback remains passive and not continuous.

In general, the findings of the Nairobi indicate that the trends in innovations and best practices are recognized and appreciated, systems of participation are appreciated, yet the gaps in institutionalization, resources, and integration of feedback remain.

### **Implications for Governance and Project Managing**

The results have serious implications on governance and project management in Nairobi City County. To begin with, the high power of innovative tools is a good indication of the need to continue investing in digital monitoring infrastructure. In their pursuit of an all round adoption, county governments need to focus on capacity building on predictive analytics, dashboard management, and geospatial technologies. This also affects the distribution of resources, since technologies that are integrated into monitoring need specific funding and permanent training.

Second, the limited adaptation of the international best practices indicates the necessity of being flexible in terms of governance models. Nairobi should not blindly copy and paste international models, but rather localize its practices like Results-Based Management and Sustainable Development Goal indicators to the local setting. This involves increased interdepartmental integration that would provide uniformity in application and avoid a fracturation of monitoring practice.

Third, there is a gap in governance due to poor participation of citizens and knowledge management. Project management tools should be used in effective projects, but inclusive structures should be designed to introduce the citizen voice in the decision-making. To ostracize accountability, the governance of Nairobi must institutionalize participatory-based monitoring, establish feedback structures that are able to convert citizen input to action and, finally, digitize citizen participation.

In reality, these results imply that project managers need to implement hybrid monitoring strategies- the combination of dashboards and international standards with a local participatory system. This would increase transparency, create trust, and make sure the outcomes of service delivery conform to the needs of citizens.

### **Theoretical Contribution**

The research work adds to the theoretical knowledge of monitoring and evaluation systems by implementing the Results-Based Management (RBM) framework in a devolved system of governance. RBM focuses on the correlation of the inputs, activities, outputs, outcomes, and impacts and monitoring and evaluations are the essential feedback loops of adaptive learning and accountability. The results confirm the importance of RBM by showing that such innovations as dashboards, geospatial tools, and participatory monitoring enhance the results chain by enhancing the timeliness, accuracy, and legitimacy of data.

Simultaneously, the research expands the scope of RBM by pointing out the weaknesses of the approach when utilized in resource-intensive environments. Although RBM presupposes the institutional ability to gather and process data, the example of Nairobi shows that its implementation may be limited by the shortage of technical expertise, coordination, and community involvement. This is in line with Santos (2023), who made the case for adaptive RBM models incorporating real-time analytics and mechanisms for participation. When RBM is set within the devolved governance system of Nairobi, the study shows that the hybrid models exist, integrating global standards and localized innovations, which provide the theoretical framework that can be a better approach to examining project monitoring and evaluation in the developing context.

## **CONCLUSION AND RECOMMENDATION**

### **Key Findings**

This paper has reviewed the innovations in project monitoring and evaluation (M&E) systems within Nairobi City County based on the best practices in the world and the local experiences. Results indicated that innovative tools especially dashboards and geospatial technologies are an important tool in terms of accountability, timeliness and transparency of monitoring projects. Predictive analytics has not been fully adopted, however, in part because of the technical capacity and institutional under-investment.

Adoption of global best practices Clarke Results-Based Management frameworks Sustainable Development Goal indicators Was evident but not consistent across departments These frameworks did enhance efficiency in the project although it was less effective due to weak institutionalization and fragmentation of coordination between the structures.

The importance of knowledge management and citizen participation was pointed out as an important but underdeveloped area. Despite the existence of platforms to share knowledge and forums among citizens, there is a low level of impact because of low application consistency and low feedback loops. The citizens are not provided with systematic influence in decision-making and are only involved in consultation.

The statistical analysis proved that innovative tools and citizen participation were the best predictors of service delivery performance and global best practices made a valuable but lesser contribution. Generally, Nairobi has gone a long way in modernizing M&E mechanisms, but it needs to fill the gaps in capacity, coordination, and inclusiveness in order to maximize their effectiveness.

### **Policy Recommendations**

A priority of policy interventions is institutionalization of monitoring and evaluation systems in the Nairobi City County. To start with, the leadership at the county level must incorporate M&E capabilities in all the departments according to the principles of Results-Based Management, with the alignment to the national policies like the Kenya National Monitoring and Evaluation Policy (2022). Second, Nairobi needs to implement a county-wide digital M&E system, combining dashboards, GIS, and predictive analytics into one core system available to policymakers and citizens. Third, the policy must institutionalize the participation of the citizens, i.e. requiring organized public forums, digital feedback forms and knowledge sharing clusters to enhance accountability. Lastly, the national government, the council of governors and Nairobi County should also intensify their intergovernmental cooperation to align international best practices with the realities of devolved governance. These policy interventions would internalize the position of Nairobi as an innovator of M&E in Kenya and Africa.

### **Practical Recommendations**

On the ground level, Nairobi County must increase its capacity building by educating officials and project implementers on the use of dashboards, GIS and data analytics. M&E innovation should have its own sources of funds, which are sustainable beyond donor or project-based funds. The model of monitoring that project managers ought to embrace is hybrid whereby global models are integrated with local participatory models in order to enhance flexibility and sensitivity to the citizens. Digitization of citizen forums via mobile applications and real-time feedback on project Smart Dashboards should be increased to get more community participation. Knowledge management as an institutional practice, such as conducting workshops to review periodically, learning workshops, and interdepartmental peer review, should also be institutionalized by project implementers. Such practical measures will not only enhance monitoring of the project, but will also make delivery of the services responsive and efficient to the needs of citizens.

### **Areas for Further Research**

Future studies must be concerned with the longitudinal effect of new systems of M&E to the service delivery results, especially examining the effect of long-term use of dashboards, predictive analytics, and participatory systems on governance. Comparative analysis of the Nairobi city and other cities in Africa may provide more insight into cultural-level contexts that facilitate or impede the process of adapting global best practices. The role of knowledge management in institutional learning and how counties can turn continuous learning into a regular part of governance should also be investigated further. Lastly, the study ought to be conducted on how the digital citizen engagement platforms can be integrated and how they can enhance accountability and inclusiveness in the devolved governance.

## REFERENCES

1. Santos, A. M. (2023). Monitoring and evaluation of transformative innovation policy. *Research Policy*, 52(5), Article 104725. [https://www.sciencedirect.com/science/article/pii/S0038012123002264?utm\\_source=](https://www.sciencedirect.com/science/article/pii/S0038012123002264?utm_source=)
2. Otokpa, O. J., et al. (2025). Enhancing monitoring and evaluation of digital health: integrating big data analytics and artificial intelligence. *PMC / NCBI*. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC11926576/>
3. Ogise, A., & Gachengo, L. (2023). Monitoring and evaluation systems and the performance of disease-specific health projects in Homa Bay County, Kenya. *The Strategic Journal of Business & Change Management*, 10(4), 1388–1406. <http://dx.doi.org/10.61426/sjbcm.v10i4.2825>
4. Makau, J. M., & Kiarie, F. K. (2024). Monitoring & evaluation practices and performance of county funded health projects in Mombasa County, Kenya. *International Academic Journal of Economics and Finance*, 4(3), 15–27. [https://iajournals.org/articles/iajef\\_v4\\_i3\\_15\\_27.pdf](https://iajournals.org/articles/iajef_v4_i3_15_27.pdf)
5. Robertson, T., et al. (2022). Building coherent monitoring and evaluation plans with the “best-fit” approach. *Global Health Action*, 15, 2067396. <https://doi.org/10.1080/16549716.2022.2067396>
6. Tanui, S. J. (2023). An exploration of the extent of monitoring and evaluation of sustainable practices: barriers in the Kenyan construction industry. *Sustainability*, 15(19), 14415. <https://doi.org/10.3390/su151914415>
7. Norman, G., et al. (2022). Approaches to enabling rapid evaluation of innovations in health and social care. *BMJ Open*, 12(9), e062072. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10580278/>
8. Oginga, P. A., et al. (2023). Influence of participatory monitoring and evaluation on decision-making in maternal and newborn health. *PMC / NCBI*. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10485134/>
9. Issak, E., & Silas, K. (2023). Monitoring and evaluation systems on performance of community health workers programme in Banadir region, Somalia. *International Journal of Science and Research*, 12(11). [https://chwcenral.org/wp-content/uploads/Monitoring-and-Evaluation-Systems-on-Performance-of-Community-Health-Workers-Programme-in-Banadir-Region-Somalia.pdf?utm\\_source=](https://chwcenral.org/wp-content/uploads/Monitoring-and-Evaluation-Systems-on-Performance-of-Community-Health-Workers-Programme-in-Banadir-Region-Somalia.pdf?utm_source=)
10. Nduati, P. K., Luketero, S. W., Kisimbii, J. M., & Mwenda, M. N. (2024). Monitoring and evaluation tools and performance of climate smart agricultural productivity programs in Kitui County, Kenya. *International Journal of Professional Business Review*, 9(12), 01–21. <https://dialnet.unirioja.es/descarga/articulo/9868432.pdf>
11. Mwanga, D. M., et al. (2024). A digital dashboard for reporting mental, neurological and substance use disorders in Nairobi, Kenya: Implementing an open source data technology for improving health data reporting. *PMC*. <https://pubmed.ncbi.nlm.nih.gov/39485812/>
12. Kamau, C. G., et al. (2025). Monitoring and evaluation pitfalls and project success of community development projects in Kenya. *Multi-Research Journal*, Article PDF. <https://www.multiresearchjournal.com/admin/uploads/archives/archive-1747635445.pdf>
13. Ogise, A., & Gachengo, L. (2023). Monitoring and evaluation systems and the performance of disease-specific health projects in Homa Bay County, Kenya. *The Strategic Journal of Business & Change Management*, 10(4), 1388–1406. <http://dx.doi.org/10.61426/sjbcm.v10i4.2825>
14. Anderson, N. W. (2023). Dashboards as mechanisms for community empowerment. *Journal of Public Health Management & Practice*. [https://journals.lww.com/jphmp/fulltext/2023/07000/dashboards\\_as\\_mechanisms\\_for\\_community.15.aspx](https://journals.lww.com/jphmp/fulltext/2023/07000/dashboards_as_mechanisms_for_community.15.aspx)
15. Roura, M., et al. (2024). Use of results-oriented monitoring tools to enhance accountability of large global health programmes. *PMC / NCBI*. <https://pmc.ncbi.nlm.nih.gov/articles/PMC11751940/>
16. Niestroy, I. (2022). Constructing assessment indicator dashboards for public administration and governance. In *PS4SD / JRC Report*. <https://www.ps4sd.eu/wp-content/uploads/2023/09/2022-JRC-Niestroy-report-1.pdf>
17. Mwangangi, N. S., Mulwa, A., Kyalo, D. N., & Ombati, T. (2024). Participatory monitoring and evaluation on completion of Kenya police housing scheme projects. *International Journal of Professional Business Review*, 9(9). <https://doi.org/10.26668/businessreview/2024.v9i9.4839>



18. Oginga, P. A., Muraya, K., Moses, M., & Towett, H. (2023). Influence of participatory monitoring and evaluation on decision-making in maternal and newborn health. PMC / NCBI. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10485134/>
19. Chisika, S., & Yeom, K. (2024). Enhancing citizen participation in local development planning: Case studies of Nairobi and Makueni Counties. *Visions in Sustainable Development*, 21, 233–257. <http://dx.doi.org/10.13135/2384-8677/9394>
20. Mabillard, V., et al. (2025). A Mixed-Method Approach to Evaluating Citizen Engagement in Municipal Monitoring and Evaluation. *Media & Communication*. <https://www.cogitatiopress.com/mediaandcommunication/article/download/10354/4525>
21. Oberthür, S. (2025). Public participation in EU climate governance: Assessing national energy and climate plans. *Journal of Environmental Policy & Planning*. <https://doi.org/10.1080/07036337.2025.2460194>
22. Moodie, J. R. (2022). From impact assessments towards proactive citizen participation in policymaking. *Policy & Society*, 41(3). <https://doi.org/10.1080/14494035.2022.1628162>
23. Analyzed how deeper citizen involvement in monitoring and evaluation (beyond impact assessment) adds legitimacy and better policy responsiveness. Advocates more continuous feedback loops.