International Research Journal of Project Management

Vol 8, Issue 1, pp 77-89, Nov 18, 2026, © International Research Journal Publishers, ISSN 2710-2742 (online) www.irjp.org

Incremental Development, Team Autonomy and Performance of Project Service Delivery in Nairobi City County Government, Kenya

Albert Jose Mutugeni Mogesi[1]* and Dr. Martin Kibe, PhD[2]

[1*]Postgraduate student, MSc Project Management, Jomo Kenyatta University of Agriculture and Technology

[2]Lecturer, Jomo Kenyatta University of Agriculture and Technology

Accepted: November 17, 2026

Abstract

Devolved governments across sub-Saharan Africa struggle to deliver public services effectively because rigid bureaucratic systems cannot keep pace with fast-changing urban needs. In Nairobi City County Government, the timeliness, quality and responsiveness of services remain matters of concern. This study examined the influence of two Agile Project Management practices, incremental development and team autonomy, on the performance of project service delivery in Nairobi City County Government. The study was anchored on Agile Project Management Theory and Self-Determination Theory. A quantitative explanatory cross-sectional survey design was adopted. Data were collected using a structured questionnaire administered to strategic and middle-level managers in six service departments. Of 270 questionnaires distributed, 201 were returned, a response rate of 74.4%. The instrument showed strong reliability (Cronbach's alpha 0.841 to 0.914) and construct validity. Data were analysed using descriptive statistics, Pearson correlation and simple and multiple linear regression. Respondents generally agreed that incremental development ($M = 3.85$, $SD = 0.637$) and team autonomy ($M = 3.59$, $SD = 0.494$) were practised. Both practices correlated positively and significantly with service delivery performance ($r = 0.685$ and $r = 0.589$, $p < 0.01$). Together, they explained 49.0% of the variance in performance, $F(2, 198) = 95.21$, $p < 0.001$. Incremental development was the stronger predictor (Beta = 0.538, $p < 0.001$), followed by team autonomy (Beta = 0.206, $p = 0.005$). The study concludes that phased service delivery and greater team decision-making authority can improve service delivery performance in devolved governance settings. It recommends institutionalizing phased delivery cycles and delegating day-to-day decision authority to project teams.

Keywords: *Agile Project Management, Incremental Development, Team Autonomy, Service Delivery Performance, County Government, Nairobi*

INTRODUCTION

Over the past three decades, public administration worldwide has come under increasing pressure to deliver services more efficiently, transparently and responsively. Traditional bureaucratic models, characterized by hierarchical authority, rigid procedural compliance and sequential project execution, have proven increasingly inadequate for the complexity of contemporary governance (Abdullah et al., 2023). Against this backdrop, Agile Project

Management (APM) has emerged as a methodology for enhancing organizational responsiveness and project outcomes. Agile first took shape in software development, where the Agile Manifesto set out its ideas (Beck et al., 2001). Its use has since spread to construction, healthcare, finance and, more recently, public administration (Conforto et al., 2014; Mergel, 2016).

Governments have increasingly used agile practices to modernize public services. The United Kingdom's Government Digital Service built agile frameworks into central government departments, and iterative cycles, multidisciplinary teams and continuous user testing made its digital public services far more responsive (Mergel, 2016). In the United States, agile adoption in the Department of Veterans Affairs was credited with faster service and fewer processing bottlenecks (U.S. Government Accountability Office [GAO], 2012). Public institutions adopting agile practices report gains in delivery speed, service quality, stakeholder satisfaction and the ability to adapt when requirements change (Dugbartey & Kehinde, 2025).

In Africa, agile adoption in the public sector is still at an early stage. Studies from Nigeria report better project responsiveness from agile flexibility, although limited team autonomy constrained the full benefit (Chukwuka & Igweh, 2026). In Kenya, APM has historically been concentrated in construction, information and communication technology, supply chains and financial services (Onyango, 2024). Barmasai and Nyang'au (2022) found that iterative development enhanced operational efficiency at the Kenya Medical Supplies Authority, while Lekeroi and Sile (2025) reported that autonomous team structures enhanced agile decision-making in Nairobi City County.

Nairobi City County is Kenya's administrative and economic centre. It is responsible for essential services such as waste management, water and sanitation, licensing, public health, urban planning and transport. All of these depend on prompt delivery, coordination between units and flexible decision-making. Yet recurring inefficiencies, delays and rigid procedures have held back their effective provision (Lekeroi & Sile, 2025). Two agile practices are particularly relevant to these challenges. Incremental development divides projects into smaller phases that deliver usable outputs early and improve them through feedback. Team autonomy gives project teams the authority to organize their work and make day-to-day decisions without constant escalation.

Statement of the Problem

Service delivery failures in Nairobi City County have been persistently recorded across multiple sectors. According to the Office of the Controller of Budget (2026), the County's development spending reached just 28.47% of its allocation in FY 2024/25, against an average of 54.21% for the 47 counties. These figures corroborate earlier Auditor-General (2022) findings of chronic budget under-absorption and weaknesses in financial accountability, which translate directly into stalled or delayed project implementation.

Extant evidence attributes these deficits to traditional linear project management models, premised on rigid sequential planning, centralized decision-making and siloed departmental structures (Muriithi & Crawford, 2003). Onyango (2024) documented that adherence to traditional approaches in Nairobi-based projects contributed to cost overruns, missed timelines and limited responsiveness. Kenyan studies affirm a positive relationship between APM practices and performance (Barmasai & Nyang'au, 2022; Lekeroi & Sile, 2025). However, these studies remain sector-specific and offer limited insight into the multi-sectoral service delivery environment of devolved county governments. No study has examined how incremental development and team autonomy influence the performance of project service delivery across the

service departments of a Kenyan county government. This study addressed that gap in Nairobi City County Government.

Objectives of the Study

The general objective was to examine the influence of incremental development and team autonomy on the performance of project service delivery in Nairobi City County, Kenya. The specific objectives were:

i. To assess the influence of incremental development on performance of project service delivery in Nairobi City County, Kenya.
ii. To determine the influence of team autonomy on performance of project service delivery in Nairobi City County, Kenya.

LITERATURE REVIEW

This section reviews the theoretical and empirical literature relevant to the study. It first discusses Agile Project Management Theory and Self-Determination Theory, which explain how incremental development and team autonomy relate to service delivery performance. It then reviews empirical studies on each practice and identifies the gaps that the present study addresses.

Theoretical Review

Agile Project Management Theory

The theoretical foundation of APM is articulated in the Agile Manifesto, developed by seventeen software practitioners in 2001 (Beck et al., 2001). The Manifesto values individuals and interactions over processes and tools, working solutions over comprehensive documentation, customer collaboration over contract negotiation, and responding to change over following a rigid plan. These values are operationalized through twelve principles that prioritize iterative delivery and continuous improvement. The Scrum framework operationalizes these principles through time-boxed sprints, defined roles and structured reviews (Rigby et al., 2016). Within the public sector, APM theory explains how breaking complex service delivery projects into manageable increments, combined with continuous feedback, can overcome bureaucratic rigidities and improve responsiveness, quality and timeliness (Abdullah et al., 2023). In this study, APM theory underpins the first objective. It posits that breaking projects into increments enables continuous delivery of value, early identification of implementation challenges and timely incorporation of feedback.

Self-Determination Theory

Self-Determination Theory, developed by Deci and Ryan (1985), posits that motivation and performance are driven by the fulfilment of three basic psychological needs: autonomy, competence and relatedness. Autonomy is a person's feeling that they control and choose their own actions, and it strengthens engagement and intrinsic motivation. Competence is the need to feel capable and effective, while relatedness is the need for connection with others, which supports collaboration and commitment in teams. In this study, Self-Determination Theory underpins the second objective. It explains that empowering project teams with decision-making authority, responsibility and opportunities for collaborative problem-solving enhances intrinsic motivation and accountability, leading to improved project execution.

Empirical Review

Incremental Development and Performance of Project Service Delivery

Incremental development structures projects into discrete, time-bound cycles, each producing functional deliverables that are reviewed and refined through feedback (Beck et al., 2001; Dong et al., 2024). Mekkawati et al. (2024), in a systematic review of agile adoption in public

institutions, found that iterative delivery enhanced organizational responsiveness and reduced bureaucratic inertia. Breaking projects into smaller, reviewable increments allowed agencies to detect implementation gaps early. The U.S. Government Accountability Office (2012) similarly reported measurable improvements in delivery speed, cost control and user alignment in federal agencies, although hierarchical approval systems slowed iteration cycles.

In Kenya, Chelangat and Karanja (2019) found that agile practices improved project success in the construction of commercial properties in Nairobi County. However, the study was situated outside the public sector. Gacheru and Gichana (2024), examining project management approaches in the national land information management system, reported improved service delivery but did not evaluate responsiveness outcomes. Barmasai and Nyang'au (2022) observed that iterative development combined with stakeholder engagement enhanced operational efficiency in public sector projects at the Kenya Medical Supplies Authority. These studies suggest that incremental development contributes positively to project outcomes. However, little is known about its influence on the multidimensional performance of service delivery within devolved county governments.

Team Autonomy and Performance of Project Service Delivery

Team autonomy refers to the extent to which a team is trusted to decide how its work gets done, with little need for continuous supervision (Armbruster & Huemann, 2025; Moe et al., 2010). Koudriachov et al. (2025) identified flexible task allocation, shared accountability and smoother information flow as the main strengths of self-organizing agile teams, although full autonomy was often curtailed by bureaucratic hierarchies. Soe and Drechsler (2018) studied agile local government initiatives and found that formal autonomy mechanisms were not enough without supportive leadership and cultural alignment. Appoh et al. (2022) further showed that agile, cross-functional team structures improve collaboration and reduce coordination failures.

Lekeroi and Sile (2025) offer an important Kenyan reference point. They documented faster decision-making in Nairobi City County where leadership supported more autonomous team structures. Their findings suggest that when teams have more discretion over sequencing tasks and resolving problems, bureaucratic delays fall. However, evidence remains lacking for devolved county governments, where services span varied functional areas within deeply hierarchical structures (Mekkawati et al., 2024; Iskandar, 2025).

Research Gaps

The reviewed studies leave three gaps. Contextually, most evidence comes from private sector or technically specialized domains such as ICT and construction, with limited attention to multi-sector public service delivery. Conceptually, prior studies predominantly measure performance through time and cost, overlooking citizen-centred dimensions such as quality and responsiveness. Geographically, Kenyan studies remain sector-specific and do not address the service departments of a devolved county government such as Nairobi City County. The present study addresses these gaps.

Conceptual Framework

The study conceptualized incremental development and team autonomy as the independent variables and performance of project service delivery as the dependent variable, measured through timeliness, quality and responsiveness. Figure 1 shows the indicators used to measure each variable.

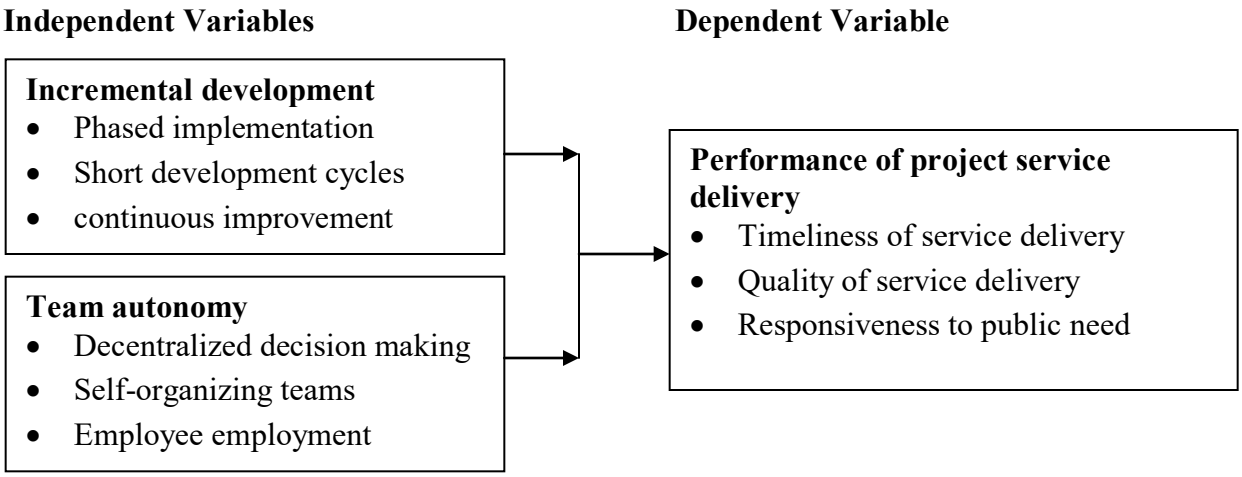


Figure 1: Conceptual framework

METHODOLOGY

Research Design

The study adopted a quantitative explanatory cross-sectional survey design. The design was appropriate because the study sought to examine and explain the influence of APM practices on the performance of project service delivery within Nairobi City County Government. Explanatory cross-sectional survey designs enable the researcher to test relationships among variables (Creswell & Creswell, 2023) and supported both descriptive and inferential analysis.

Target Population and Sampling

The target population comprised approximately 630 strategic and middle-level managers in six departments of Nairobi City County Government: Waste Management, Water and Sanitation, Licensing and Trade Facilitation, Public Health Services, Urban Planning and Development, and Transport Infrastructure. These included directors, deputy and assistant directors, principal administrative officers, sub-county administrators, senior engineers, senior accountants, medical superintendents and ICT managers involved in service delivery projects. The sample size was determined using Yamane's (1967) formula, $n = N/[1 + N(e)^2]$, with $N = 630$ and $e = 0.05$, giving 245 respondents. Stratified random sampling was used, with the six departments as strata and proportionate random selection within each stratum (Table 2).

Table 2: Target population and sample

Department	Target population	Sample size
Waste Management	130	51
Water and Sanitation	105	41
Licensing and Trade Facilitation	80	31
Public Health Services	115	45
Urban Planning and Development	85	33
Transport Infrastructure	115	44
Total	630	245

Research Instrument, Validity and Reliability

Primary data were collected using a structured, self-administered questionnaire. Each construct was measured using six items on a five-point Likert scale ranging from 1 = Strongly Disagree to 5 = Strongly Agree. Each construct included one reverse-worded item, which was recoded before analysis so that higher values consistently indicated a higher level of the construct. Content

validity was established through expert review by an academic specialist in project management and a senior engineer with experience in government project management. The instrument was pilot-tested on 25 managers from a Nairobi City County department outside the six study departments, who were excluded from the main survey.

Reliability and construct validity were reassessed on the main dataset (n = 201). Internal consistency was tested using Cronbach's alpha, and construct validity using exploratory factor analysis with principal component extraction. All three constructs exceeded the 0.70 alpha threshold, KMO values exceeded 0.60, Bartlett's tests were significant at $p < .001$, and a single factor explaining more than 50% of the variance was extracted for each construct (Hair et al., 2019), as shown in Table 3.

Table 3: Reliability and construct validity results (n = 201)

Construct	Items	Cronbach's alpha	KMO	Bartlett's χ^2	Eigenvalue	% variance explained
Incremental development	6	0.914	0.910	742.38	4.200	70.00
Team autonomy	6	0.841	0.873	396.51	3.344	55.73
Service delivery performance	6	0.875	0.883	451.40	3.507	58.46

Data Collection and Analysis

Ethical clearance was obtained from the JKUAT Research Project Review Board, and authorization from the Office of the County Secretary of Nairobi City County Government. Questionnaires were distributed to 270 managers through researcher-assisted distribution and an online Google Forms platform, with follow-up reminders after one week. Data were analysed using SPSS Statistics Version 32. A composite score was computed for each construct as the mean of its six items. Means and standard deviations described the variables. Pearson correlation established the direction and strength of relationships. Simple linear regression assessed the individual effect of each practice, and multiple linear regression established their combined and relative contributions. The multiple regression model was specified as:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \varepsilon$$

where Y is performance of project service delivery, X_1 is incremental development, X_2 is team autonomy, β_0 is the constant, β_1 and β_2 are the regression coefficients and ε is the error term. Multicollinearity was assessed using tolerance and variance inflation factor (VIF) values, with VIF below 5 and tolerance above 0.10 taken as acceptable (Hair et al., 2019). All tests were interpreted at the 0.05 level of significance.

Ethical Considerations

Participation was voluntary, and an informed consent statement explained that the study was for academic purposes and that respondents could withdraw at any time. Respondents were asked not to write their names or other identifying information on the questionnaire, and the information provided was treated confidentially.

RESULTS AND DISCUSSION

Response Rate and Respondent Profile

Of the 270 questionnaires distributed, 201 were completed and returned, a response rate of 74.4%. Most respondents (46.27%) were aged 35–44 years. In total, 92.04% held at least a bachelor's degree, with master's degree holders forming the largest group (32.84%). Senior administrative officers (24.38%), ICT officers or systems analysts (21.39%), technical officers or engineers (20.40%), project managers or programme officers (17.91%) and departmental heads

or directors (15.92%) were represented. Most respondents (41.79%) had 6–10 years of experience, and none had less than two years. Each of the six departments contributed between 14.43% and 18.41% of respondents.

Incremental Development

Table 4: Descriptive statistics for incremental development (n = 201)

Statement	Mean	SD
Services in my department are implemented in well-defined phases rather than as a single large project.	3.65	0.787
My department delivers measurable service improvements at the end of each project phase.	3.83	0.765
Work in my department is organized into short, focused cycles that enable regular progress review.	3.83	0.751
Lessons learned from earlier project phases are rarely applied to improve subsequent stages.	3.88	0.718
Continuous improvement is embedded as a standard practice in how services are delivered.	3.95	0.763
In my department, service delivery improvements are implemented incrementally rather than all at once.	3.93	0.787
Composite mean	3.85	0.637

Note. (R) = reverse-coded item; the mean is reported after recoding.

Incremental development recorded a composite mean of 3.85 (SD = 0.637), indicating that respondents generally agreed that their departments practise incremental delivery. The highest-rated item was the embedding of continuous improvement as standard practice (M = 3.95). The lowest was the implementation of services in well-defined phases (M = 3.65), suggesting that formal phase structuring is less consistently practised than ongoing improvement. This is consistent with Mergel (2016), who observed that continuous improvement tends to be institutionalized earlier in public sector agile adoption than formal sprint structuring.

Team Autonomy

Table 5: Descriptive statistics for team autonomy (n = 201)

Statement	Mean	SD
Project teams in my department have the authority to make day-to-day decisions without requiring senior approval.	3.60	0.665
All significant project decisions must be escalated to senior management before any action is taken.	3.70	0.634
Teams in my department are able to organize their own work plans and assign tasks among themselves.	3.45	0.677
Decentralized approval processes facilitate timely implementation of service delivery projects in my department.	3.61	0.670
Staff are encouraged to take initiative and propose solutions when challenges arise during project implementation.	3.60	0.664
Individual staff members feel confident exercising their professional judgement in the course of project work.	3.61	0.663
Composite mean	3.59	0.494

Note. (R) = reverse-coded item; the mean is reported after recoding.

Team autonomy recorded a composite mean of 3.59 (SD = 0.494), lower than incremental development. The ability of teams to organize their own work plans and assign tasks among

themselves was the lowest-rated item (M = 3.45). These findings suggest that while teams exercise some operational autonomy, hierarchical approval processes remain a feature of project governance in Nairobi City County departments, consistent with the bureaucratic culture documented by Lekeroi and Sile (2025).

Performance of Project Service Delivery

Table 6: Descriptive statistics for performance of project service delivery (n = 201)

Statement	Mean	SD
Services in my department are generally delivered within the planned timelines.	3.67	0.687
Delays in service delivery are a frequent occurrence in my department.	3.93	0.660
The quality of services delivered by my department meets public expectations.	3.62	0.645
Service quality in my department has improved over the past two years.	3.71	0.704
My department responds promptly when members of the public raise service-related concerns or requests.	3.84	0.654
Public complaints about service delivery in my department are resolved in a timely manner.	3.72	0.717
Composite mean	3.75	0.518

Note. (R) = reverse-coded item; the mean is reported after recoding.

Performance of project service delivery recorded a composite mean of 3.75 (SD = 0.518), suggesting that respondents perceived their departments as performing above a neutral level on timeliness, quality and responsiveness. The reverse-coded item on frequent delays returned the highest mean after recoding (M = 3.93), indicating that respondents were relatively willing to affirm the absence of frequent delays. Whether service quality meets public expectations recorded the lowest mean (M = 3.62), suggesting that quality relative to public expectations remains a challenge.

Correlation Analysis

Table 7: Pearson correlation matrix (n = 201)

Variable	Incremental development	Team autonomy	Service delivery performance
Incremental development	1		
Team autonomy	0.711**	1	
Service delivery performance	0.685**	0.589**	1

Note. ** Correlation is significant at the 0.01 level (2-tailed).

Both practices had positive, strong and statistically significant relationships with the performance of project service delivery. Incremental development had the stronger relationship (r = 0.685), followed by team autonomy (r = 0.589). The two practices were also strongly related to each other (r = 0.711), which is theoretically expected, since departments that adopt incremental delivery are also likely to empower their teams (Koudriachov et al., 2025).

Regression Analysis

Table 8: Simple regression results (n = 201)

Independent variable	R^2	Adjusted R^2	β	t	p-value
Incremental development	0.469	0.467	0.685	13.26	< 0.001
Team autonomy	0.347	0.344	0.589	10.28	< 0.001

Note. Dependent variable: performance of project service delivery; df = 1, 199 for each model.
Each practice individually and significantly predicted service delivery performance. Incremental development explained 46.9% of the variance in performance ($\beta = 0.685$, $p < 0.001$), and team autonomy explained 34.7% ($\beta = 0.589$, $p < 0.001$).

Table 9: Multiple regression model summary

Model	R	R^2	Adjusted R^2	Std. error of the estimate
1	0.700	0.490	0.485	0.372

Note. Predictors: (Constant), incremental development, team autonomy. Dependent variable: performance of project service delivery.

The model yielded an R of 0.700, showing a strong combined relationship between the two practices and service delivery performance. The R^2 of 0.490 indicates that incremental development and team autonomy jointly explained 49.0% of the variance in service delivery performance. The remaining 51.0% is attributable to factors outside the model.

Table 10: Analysis of variance (ANOVA)

Model	Sum of squares	df	Mean square	F	p-value
Regression	26.31	2	13.155	95.21	< 0.001
Residual	27.36	198	0.138		
Total	53.66	200			

The ANOVA results show that the model was statistically significant, $F(2, 198) = 95.21$, $p < 0.001$. The two practices together therefore predicted service delivery performance better than the mean alone (Hair et al., 2019).

Table 11: Regression coefficients

Variable	B	Std. error	β	t	p-value	Tolerance	VIF
(Constant)	1.288	0.196		6.587	< 0.001		
Incremental development	0.438	0.059	0.538	7.461	< 0.001	0.494	2.022
Team autonomy	0.216	0.076	0.206	2.858	0.005	0.494	2.022

Note. Dependent variable: performance of project service delivery.

Both practices made positive and statistically significant unique contributions. Incremental development was the stronger predictor ($\beta = 0.538$, $p < 0.001$), followed by team autonomy ($\beta = 0.206$, $p = 0.005$). The tolerance of 0.494 and VIF of 2.022 indicate that multicollinearity was not a concern. The fitted model was:

$$Y = 1.288 + 0.438X_1 + 0.216X_2$$

Holding team autonomy constant, a one-unit increase in incremental development was associated with a 0.438-unit increase in service delivery performance. Holding incremental development constant, a one-unit increase in team autonomy was associated with a 0.216-unit increase. The constant of 1.288 is mainly theoretical, since a score of zero cannot occur on the five-point scale.

Discussion

The first objective sought to assess the influence of incremental development on performance of project service delivery. Incremental development was the strongest predictor of service delivery performance, both on its own ($R^2 = 0.469$) and when team autonomy was controlled ($\beta = 0.538$, $p < 0.001$). Departments that break service delivery projects into well-defined phases, review progress in short cycles and embed continuous improvement tend to achieve better timeliness, quality and responsiveness. This supports Agile Project Management Theory, which holds that iterative delivery enables early delivery of value and early correction of deficiencies (Beck et al.,

2001; Rigby et al., 2016). It is consistent with Mekkawati et al. (2024), who found that iterative delivery reduced bureaucratic inertia in public institutions, and with Barmasai and Nyang'au (2022), who linked iterative development to improved efficiency at the Kenya Medical Supplies Authority. The lower rating for well-defined phases suggests that formal phase structuring is the area where incremental practice in Nairobi City County could be strengthened most.

The second objective sought to determine the influence of team autonomy on performance of project service delivery. Team autonomy had a strong positive relationship with performance ($r = 0.589$) and remained a significant predictor when incremental development was controlled ($\beta = 0.206$, $p = 0.005$). Departments in which project teams exercise greater decision-making authority and self-organization therefore achieve better service delivery outcomes. This supports Self-Determination Theory, which links autonomy to motivation, accountability and performance (Deci & Ryan, 1985), and the Agile Manifesto's emphasis on self-organizing teams (Beck et al., 2001). It is consistent with Lekeroi and Sile (2025), who reported faster decision-making where Nairobi City County teams had more autonomy, and with Koudriachov et al. (2025) on the benefits of self-organizing teams. Team autonomy's unique contribution was smaller than its individual effect, reflecting its strong overlap with incremental development ($r = 0.711$). This suggests that autonomy and incremental delivery reinforce each other, as Soe and Drechsler (2018) observed for agile local governments. The relatively low rating for teams organizing their own work plans also indicates that hierarchical approval processes still limit autonomy in the County.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

The study concludes that incremental development has a significant positive influence on the performance of project service delivery in Nairobi City County Government and is the stronger of the two practices examined. Delivering services in phases, reviewing progress in short cycles and embedding continuous improvement are associated with better timeliness, quality and responsiveness.

The study further concludes that team autonomy has a significant positive influence on service delivery performance, although its unique contribution is smaller than that of incremental development. Teams with greater decision-making authority deliver better services, but hierarchical approval processes continue to constrain autonomy in the County's departments.

Together, the two practices explained nearly half of the variation in service delivery performance, showing that agile practices can meaningfully improve service delivery in devolved governance settings.

Recommendations

Nairobi City County Government should institutionalize phased delivery of service projects. Large projects should be broken into well-defined phases with clear deliverables, short review cycles and documented lessons that inform subsequent phases. Since formal phase structuring was the lowest-rated incremental practice, departments should adopt standard phase plans and progress reviews for all service delivery projects.

The County should also delegate day-to-day decision-making authority to project teams and simplify approval processes for routine project decisions. Teams should be allowed to organize their own work plans and assign tasks among themselves, which was the lowest-rated autonomy practice. Training and supportive leadership are needed so that delegated authority is used effectively.

At the policy level, the County should integrate incremental delivery and team autonomy into its performance management framework and county integrated development planning, so that these practices are applied consistently across departments rather than depending on individual managers.

Limitations and Suggestions for Further Research

The cross-sectional design captures relationships at one point in time, so the results show association and prediction rather than causation. All variables were measured through managers' self-reported perceptions, which may introduce common-method and social desirability bias, and citizens' views and objective service records were not included. The study was confined to six departments of one county government, which limits generalization. Service delivery performance was analysed as a single composite score, so the influence of the practices on timeliness, quality and responsiveness could not be separated. Future studies could use citizen surveys and administrative service records, compare several counties, examine the three performance dimensions separately, and test whether team autonomy and incremental development interact.

REFERENCES

Abdullah, P. P., Raharjo, T., Hardian, B., & Simanungkalit, T. (2023). Challenges and best practices solution of agile project management in public sector: A systematic literature review. *JOIV: International Journal on Informatics Visualization, 7*(2), 606–614. https://doi.org/10.30630/joiv.7.2.1098

Appoh, M., Frempong, D., Akinboboye, O., Okoli, I., Afrihyia, E., Umar, M. O., Umana, A. U., & Omolayo, O. (2022). Agile-based project management strategies for enhancing collaboration in cross-functional software development teams. *Journal of Frontiers in Multidisciplinary Research, 3*(2), 49–64. https://doi.org/10.54660/.IJFMR.2022.3.2.49-64

Armbruster, J., & Huemann, M. (2025). Dynamic tensions of individually experienced autonomy in agile project teams: A conceptual model. *Project Leadership and Society, 6*, 100202. https://doi.org/10.1016/j.plas.2025.100202

Auditor-General. (2022). *Report of the Auditor-General on County Executive of Nairobi City for the year ended 30 June 2022*. Office of the Auditor-General.

Barmasai, K. S., & Nyang'au, S. (2022). Agile project management practices and successful implementation of public sector projects at Kenya Medical Supplies Authority (KEMSA). *Journal of Project Management, 5*(2).

Beck, K., Martin, R. C., Fowler, M., Thomas, D., Sutherland, J., Grenning, J., & Schwaber, K. (2001). *Manifesto for agile software development*. http://www.agilemanifesto.org

Chelangat, N., & Karanja, P. N. (2019). Agile project management and project success in the construction of commercial properties in Nairobi County, Kenya. *Strategic Journal of Business & Change Management, 5*(4). https://doi.org/10.61426/sjbcm.v5i4.960

Chukwuka, E. J., & Igweh, K. F. (2026). Project management and infrastructure development of Nigeria: A comprehensive analysis. *International Journal of Research, 13*(1), 1–29. https://doi.org/10.5281/zenodo.18146230

Conforto, E. C., Salum, F., Amaral, D. C., da Silva, S. L., & de Almeida, L. F. M. (2014). Can agile project management be adopted by industries other than software development? *Project Management Journal, 45*(3), 21–34. https://doi.org/10.1002/pmj.21410

Creswell, J. W., & Creswell, J. D. (2023). *Research design: Qualitative, quantitative, and mixed methods approaches* (6th ed.). SAGE Publications.

Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. Springer. https://doi.org/10.1007/978-1-4899-2271-7

Dong, H., Dacre, N., Baxter, D., & Ceylan, S. (2024). What is agile project management? Developing a new definition following a systematic literature review. *Project Management Journal, 55*(6), 668–688. https://doi.org/10.1177/87569728241254095

Dugbartey, A. N., & Kehinde, O. (2025). Optimizing project delivery through agile methodologies: Balancing speed, collaboration and stakeholder engagement. *World Journal of Advanced Research and Reviews, 25*(1), 1237–1257. https://doi.org/10.30574/wjarr.2025.25.1.0193

Gacheru, G. W., & Gichana, J. O. (2024). Project management approaches and service delivery of national land information management system in Kenya. *International Journal of Social Sciences Management and Entrepreneurship, 8*(2). https://www.sagepublishers.com/index.php/ijssme/article/view/444

Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2019). *Multivariate data analysis* (8th ed.). Cengage.

Iskandar, D. (2025). Beyond traditional bureaucracy: Building agile public organizations in an era of disruption. *Journal of Public Policy and Local Government*, 46–56. https://doi.org/10.70188/58sakn58

Koudriachov, C., Tam, C., & Aparicio, M. (2025). Success with agile project management: Looking back and into the future. *Journal of Systems and Software, 226*, 112428. https://doi.org/10.1016/j.jss.2025.112428

Lekeroi, B. O., & Sile, I. (2025). Leadership styles and agile decision-making in county governments in Kenya: A case study of Nairobi City County, Kenya. *International Journal of Social Science and Humanities Research, 3*(2), 190–208. https://doi.org/10.61108/ijsshr.v3i2.200

Mekkawati, H., Raharjo, T., & Yuniarti, R. (2024). Systematic literature review: Challenges and solutions on agile project management in public sector. *JITK (Jurnal Ilmu Pengetahuan dan Teknologi Komputer), 10*(2), 449–460. https://doi.org/10.33480/jitk.v10i2.5654

Mergel, I. (2016). Agile innovation management in government: A research agenda. *Government Information Quarterly, 33*(3), 516–523. https://doi.org/10.1016/j.giq.2016.07.004

Moe, N. B., Dingsøyr, T., & Dybå, T. (2010). A teamwork model for understanding an agile team: A case study of a Scrum project. *Information and Software Technology, 52*(5), 480–491. https://doi.org/10.1016/j.infsof.2009.11.004

Muriithi, N., & Crawford, L. (2003). Approaches to project management in Africa: Implications for international development projects. *International Journal of Project Management, 21*(5), 309–319. https://doi.org/10.1016/S0263-7863(02)00048-0

Office of the Controller of Budget. (2026). *County governments budget implementation review report, FY 2024/25*. Office of the Controller of Budget.

Onyango, B. E. A. (2024). *Agile project management practices and performance of Zuku fiber optic internet projects in Nairobi County, Kenya* [Master's thesis, University of Nairobi]. http://erepository.uonbi.ac.ke/handle/11295/167455

Rigby, D. K., Sutherland, J., & Takeuchi, H. (2016). Embracing agile. *Harvard Business Review, 94*(5), 40–50.

Soe, R.-M., & Drechsler, W. (2018). Agile local governments: Experimentation before implementation. *Government Information Quarterly, 35*(2), 323–335. https://doi.org/10.1016/j.giq.2017.11.010

U.S. Government Accountability Office. (2012). *Software development: Effective practices and federal challenges in applying agile methods* (GAO-12-681). https://www.gao.gov/products/gao-12-681

Yamane, T. (1967). *Statistics: An introductory analysis* (2nd ed.). Harper & Row.