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Examining the Effectiveness of e-Governance in Public Institution: A Case Study of Ministry of Local Government Land Records Unit

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Abstract
This study examined the effectiveness of e-governance in enhancing service delivery and operational efficiency in the Land Records Unit. The study adopted an exploratory case study design and utilized a mixed-method approach, combining both qualitative and quantitative techniques to collect primary data. The study found that e-governance positively influenced service delivery, transparency, and accountability in the Ministry of Local Government's Land Records Unit. The study found that E-governance has improved service delivery, operational efficiency, and transparency in the Land Records Unit. About 32.5% of respondents accessed land registration and 30% accessed plot allocation services online, with 75% completing transactions within a week. Record accuracy (37.5%) and faster processing (35%) were the main satisfaction drivers, though approval bottlenecks (37.5%) and system downtime (27.5%) caused delays. File retrieval efficiency improved (35%), and technical officers benefited most (35%), but limited training (35%) and technical errors (27.5%) constrained operations. Transparency gains were noted through accessible application status (37.5%), complaint tracking systems (35%), and automated activity logs (37.5%), with citizens as the main beneficiaries (42.5%). Major challenges included unstable internet (37.5%), limited staff capacity (35%), and weak infrastructure. Policy reform (37.5%) and infrastructure investment (35%) were identified as key strategies for sustaining E-governance effectiveness. To improve service delivery, the Ministry should improve technical reliability by upgrading servers, software, and internet connectivity, while enhancing platform accessibility through a simplified interface, mobile options, and multilingual support. Adequate resources and regular system maintenance should be ensured, alongside continuous staff training to build technical competence and address resistance to change.

Keywords: Cost Overruns, Construction Projects

1. Introduction

1.1 Background

The application of information and communication technologies (ICTs) in the public sector, has revolutionized the relationship between governments, citizens, and businesses by promoting transparency, accountability, and efficiency (Sikaonga, 2020). As a concept, e-governance encompasses the use of digital platforms for service delivery, citizen engagement, data management, and decision-making processes. By leveraging ICTs, governments aim to improve service delivery, reduce corruption, enhance policy implementation, and foster inclusive governance (Liywalii, 2019) [19].

Globally, the adoption of e-governance has been driven by rapid technological advancements, the increasing availability of internet connectivity, and a growing demand for efficient public services (Atiq, 2023). Initiatives such as the United Nations' E-Government Development Index (EGDI) have provided benchmarks for assessing countries' e-governance progress. In developed countries, platforms such as Estonia's e-Residency program and South Korea's integrated digital services have demonstrated the potential of e-governance to create citizen-centric services (Kumar, 2023) [18].

E-governance is underpinned by various international and regional frameworks, including the United Nations Sustainable Development Goals (SDGs), particularly Goal 16, which emphasizes accountable and inclusive institutions. National ICT policies, digital transformation strategies, and public administration reforms form the backbone of e-governance implementation at the country level (Lyulyov, 2024). However, the alignment of these policies with global standards and the capacity to execute them effectively remain critical areas of concern (Kumar, 2023) [18].

The effectiveness of e-governance determines its ability to deliver on its promises of transparency, accountability, and citizen empowerment. When successful, e-governance fosters trust in government, enhances policy outcomes, and promotes socio-economic development. Conversely, poorly implemented e-governance initiatives can exacerbate inequalities, erode public trust, and result in wasted resources (Bwalya, 2019) [7]. This study, therefore, seeks to examine the effectiveness of e-governance in government institutions, assessing its impact on service delivery, citizen engagement, and institutional efficiency. By exploring these dimensions, the research aims to contribute to the ongoing discourse on optimizing e-governance for inclusive and sustainable development.

1.2 Statement of the Problem

E-governance has emerged as a pivotal tool for enhancing government efficiency, transparency, and service delivery globally. However, in many countries, including Zambia, the effectiveness of e-governance in achieving these objectives remains inconsistent and largely underexplored (Bwalya, 2019) [7]. While digital transformation efforts have been initiated in government institutions, challenges such as low internet penetration, inadequate infrastructure, digital illiteracy, and resistance to technological adoption hinder their success (Bwalya, 2019) [7]. The existing gap lies in understanding why e-governance has not achieved its intended outcomes. While there is global evidence of its potential, localized studies on its effectiveness in government institutions, particularly in addressing issues like service delivery inefficiencies and citizen engagement, are limited. Moreover, the lack of empirical assessments to guide policy adjustments and resource allocation perpetuates these challenges. By examining the phenomenon within the local context, this research aimed at bridging the knowledge gap, inform policy makers, and contribute to the optimization of e-governance systems. The findings are critical in ensuring that e-governance fulfills its role as a catalyst for transparent, accountable, and inclusive governance. Further research is warranted to address these prevailing issues, ensuring that technological advancements translate into meaningful societal benefits.

1.3 General Objectives

To examine the effectiveness of e-governance in enhancing service delivery and operational efficiency in the Ministry of Local Government's Land Records Unit.

1.3.1 Specific Objectives

1. To establish the effect of E-governance on delivery in the Land record unit of the ministry of local government.
2. To examine how E-governance enhances efficiency in the operations of the lands record units.
3. To evaluate the role of E-governance in promoting transparency in the land Records unit.
4. To analyze the relationship between E-governance and the key challenges that are affecting the implementation in the Land Record unit.

1.4 Conceptual Framework

The conceptual framework for this study examined the relationship between the implementation of e-governance and its impact on the performance of government institutions, moderated by key challenges and opportunities. The independent variable is e-governance implementation, which encompassed factors such as ICT infrastructure (hardware, software, and networks), accessibility of e-governance platforms (ease of use and inclusivity), policy frameworks (laws and regulations supporting digital governance), and capacity building (training and technical expertise of personnel).

The dependent variable is government institutional performance, measured through efficiency in service delivery (timeliness and cost-effectiveness), transparency and accountability (openness in decision-making and reduced corruption), and citizen engagement (participation in governance and feedback mechanisms).

2. Literature Review

2.1 The effect of e-governance on the effectiveness of service delivery in government institutions

Alhassan, G.S., (2020) [3] examined the current state of e-governance in Ghana and its perceived relationship with sustainable development, highlighting how sustainability can be achieved through systems thinking. The findings indicate a strong correlation between e-governance and sustainable development. The study also revealed that the implementation of e-government initiatives directly influences the three pillars of sustainable development economic, social, and environmental. Specifically, e-governance facilitates remote service delivery, reducing the economic, social, and environmental costs associated with traditional service provision (Alhassan, 2020) [3].

Pandey (2023) [27] examined the relationship between public trust and the performance of collaborative e-governance, focusing on trust in government institutions as the core subject of investigation. The findings highlight that the reliability and effectiveness of e-governance services play a key role in building public trust. The study also identified a gap in providing customised responses to citizen queries, complaints, and suggestions, representing a weakness in efforts to strengthen public trust (Pandey, 2023) [27].

Khadka (2024) [16] assessed the effectiveness of e-governance in public service delivery within Kathmandu Metropolitan City (KMC), examined the main barriers citizens face in accessing e-services, and analysed how demographic factors relate to perceptions of e-governance. The findings indicate that reliability, assurance, and satisfaction with KMC services reflect a high level of e-governance effectiveness. Logit model analysis showed that ICT skills, age, and gender significantly influence perceptions of effectiveness, with higher ICT skills and older age groups associated with more positive evaluations. Most respondents believed technological advancements could streamline processes and reduce delays. While e-governance methods have achieved moderate success, the study recommends a comprehensive strategy to address both technical and non-technical issues, particularly by improving citizens' digital literacy. Despite its limitations, the research identifies areas for further study to strengthen governance (Khadka, 2024) [16].

2.2 The extent to which e-governance enhances accountability in government institutions

Matlala (2025) [22] examined the barriers and enablers influencing the adoption of Virtual Evaluation (VE) in South Africa's public sector. The study identified challenges such as limited digital skills, inadequate infrastructure, unclear policy direction, and insufficient stakeholder engagement, pointing to the need for targeted interventions. VE is recognised as a useful tool in public sector monitoring and evaluation (M&E), offering benefits in efficiency, accessibility, and cost savings. The growing focus on digital transformation in South Africa has increased interest in integrating VE into public sector evaluation processes, though empirical research on its adoption particularly in government M&E institutions remains scarce (Matlala, 2025) [22].

The transparency afforded by e-governance systems ensures that government actions are visible to the public, reducing the opportunity for corruption or mismanagement. The digital accessibility of documents and records, such as tender announcements, contracts, and government procurement processes, allows citizens to verify that public contracts and spending align with regulations and ethical standards. This public scrutiny acts as a deterrent to unethical behavior and helps keep officials accountable for their actions (Klochan, 2021). E-governance systems enable real-time monitoring and auditing of government operations, which is crucial for holding government institutions accountable. Through integrated digital platforms, citizens can track the progress of public projects, the disbursement of funds, and the implementation of policies. Government departments can be monitored continuously, and their performance can be assessed against predefined benchmarks and objectives. This real-time feedback loop makes it more difficult for public officials to divert funds or misuse resources without being detected (Chilembo, 2021) [8].

2.3 The role of E-governance in promoting transparency in the land Records unit

E-governance refers to the application of information and communication technologies (ICTs) in the delivery of government services, exchange of information, and management of administrative processes (Atiq, 2023). In the context of land administration, e-governance introduces digital systems that transform how land records are created, stored, accessed, and verified (Balaji, 2025) [5]. The traditional land administration system in many countries, particularly in developing contexts, has been characterized by inefficiency, limited access to information, corruption, and disputes over ownership and boundaries (Khadka, 2024) [16]. These problems often arise because manual systems depend heavily on paper records, physical files, and the discretion of officers (Abdulnabi, 2024) [1].

The introduction of e-governance in land records management seeks to reduce such problems by increasing transparency, accountability, and public participation (Lyulyov, 2024). Transparency is achieved when government processes, data, and decisions are open to public scrutiny, thereby reducing opportunities for corruption and administrative manipulation (Batool, 2021). This discussion examines how e-governance promotes transparency in the land records unit through digital record management, process automation, public access to information, integration of systems, and electronic auditing mechanisms.

One of the most significant ways e-governance promotes transparency is through the digitization and online accessibility of land information (Idzi & Gomes, 2022) [14]. Traditionally, accessing land records required individuals to visit local government offices, where information was stored manually in physical registers. This process was time-consuming and often limited to those with connections or financial means (Bwalya, 2019) [7]. In many cases, information was withheld, altered, or misplaced, creating room for corruption and manipulation (Liywalii, 2019) [19]. E-governance addresses these challenges by establishing digital land information systems where data is available online to both officials and the public (Kumar, 2023) [18]. Citizens can now search and verify ownership records, plot boundaries, survey maps, and transaction histories without intermediaries (Mataka & Mungulube, 2020) [21]. Systems such as India's Digital India Land Records Modernization Programme (DILRMP) and Kenya's Ardhisasa platform allow citizens to view ownership records, pay land rates, and track the progress of applications online (Grigalashvili, 2022) [13]. Such platforms have made it possible for citizens to hold institutions accountable, detect irregularities, and contest fraudulent claims (Gil, Cortés-Cediel & Cantador, 2022) [12]. The transparency created through public access to digital land records ensures that land information is no longer confined to a few individuals but becomes a shared public resource (Matlala, 2025) [22].

2.4 Challenges hindering the successful implementation of e-governance initiatives

Tennakoon (2020) [34] investigated the potential challenges and opportunities of e-governance in developing countries, focusing on the case of Sri Lanka. The findings suggest practical measures, including investment in ICT infrastructure, legal and administrative reforms, and enhanced transparency and democratic practices in government decision-making (Tennakoon, 2020) [34].

Abdulnabi (2024) [1] examined trends in e-governance services, their effectiveness, and the challenges involved in improving service delivery. The findings indicate that the virtual nature and dynamics of the Internet can enhance public service delivery and enable new users to carry out secure e-commerce transactions. The study concludes that e-government is essential for addressing future challenges and responding to both current and historical issues to build public trust. Additionally, understanding how to reduce inefficiencies, assess the likelihood of efficiency, and evaluate the cost of alternative outcomes can help lessen their impact (Abdulnabi, 2024) [1].

Al-Busmait (2025) examined the influence of e-governance on the quality and effectiveness of educational institutions, as well as the challenges affecting its implementation. The study applied a systematic literature review with a descriptive-analytical approach to provide a comprehensive view of the subject. From an initial pool of 104 studies, the final selection comprised 36 studies published between 2006 and 2023, following the application of exclusion criteria. The findings indicate that e-governance plays a significant role in enhancing the performance of educational institutions. The study also identifies key challenges to its adoption and emphasises the need for practical solutions to address these issues. In addition, the research contributes to building a knowledge base that offers insight into the state of e-governance in educational institutions within developing countries. The outcomes are relevant for policymakers and present a model for implementing electronic educational management aimed at improving the quality of educational services in the future (Al-Busmait, 2025).

Samsor (2021) [29] investigated the challenges and barriers to implementing e-government in developing and conflict-affected countries, focusing on ICT-related and social obstacles commonly experienced in contexts such as Afghanistan. E-government is recognised as a key means. The results from both quantitative and qualitative analyses were compiled and presented. The empirical findings identified five major obstacles from a list of 15 reported by respondents: stakeholder involvement (mean score 4.1145), coordination (4.0038), information sharing (3.9962), ICT literacy (3.9822), and e-government awareness (3.8830). These challenges were also confirmed through in-depth interviews, with detailed explanations provided in the study (Samsor, 2021) [29].

3. Research Methodology

3.1 Research Design

The study adopted an exploratory case study, utilizing a mixed method approach.

3.2 Target Population

The target population for this study were employees under the ministry of technology.

3.3 Sample Size

The study consisted of 80 businesses under the hospitality industry.

3.4 Sampling

Convenience sampling approach was used to select the study sample.

3.5 Data Collection Methods

Interviews were primarily conducted face-to-face, with electronic questionnaires also being utilized to collect information on the research variables. The main data collection method for this study was a structured questionnaire containing closed-ended questions.

4. Result Presentation

4.1 Presentation of results on background characteristics of the respondents

The results show that out of the total 80 respondents who participated in the study, 68.8% were male (55 individuals) and 31.3% were female (25 individuals).

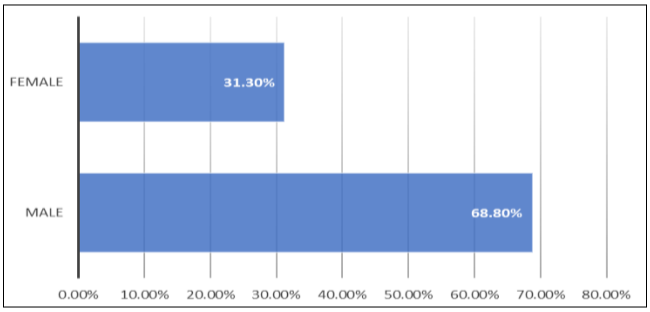

Fig 4.1.1: Participant's Gender

Half of the respondents (50%) were aged 30 to 39 years, making it the most represented age group. The 22–29 years and above 50 years groups each accounted for 20% of the sample, while 10% were in the 40–49 years range.

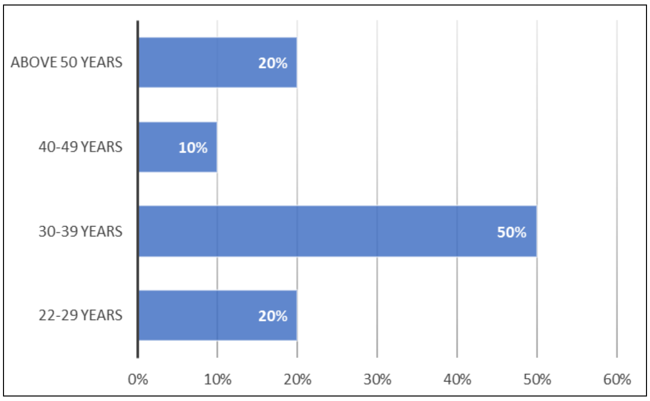

Fig 4.1.2: Age

The majority of respondents (51.3%) were married, followed by single individuals at 30%, and divorced participants at 18.8%. This reflects a higher representation of individuals in stable marital relationships.

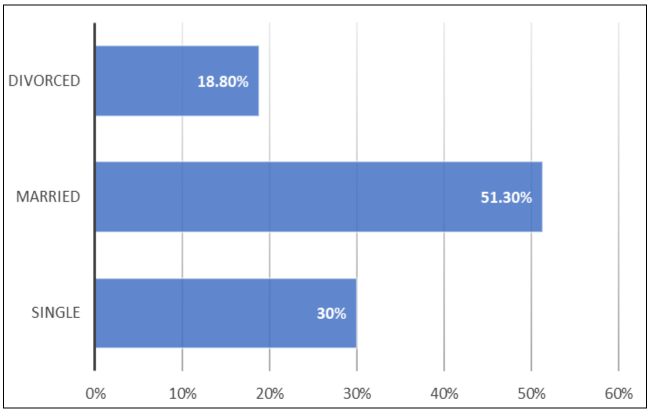

Fig 4.1.3: Marital Status

A significant portion of respondents (41.3%) held a Bachelor's degree, followed by Diploma holders at 30%. Those with a Certificate made up 20%, and Master's degree holders represented the smallest group at 8.8%. This distribution suggests a relatively well-educated sample population, with most having attained tertiary-level education.

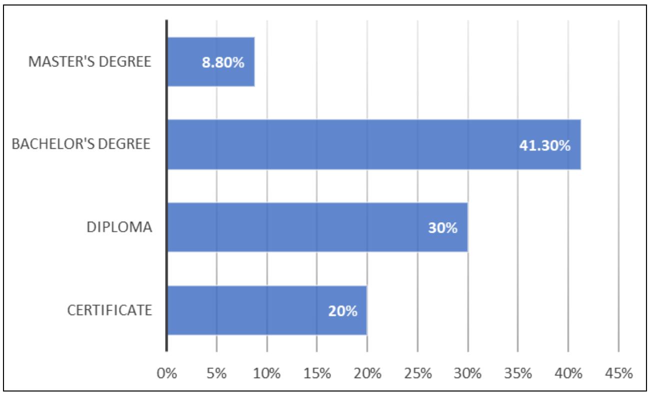

Fig 4.1.4: Education Background

4.2 Effect of E-Governance on Service Delivery

The study found that 32.5% of respondents most frequently accessed land registration services through the E-governance platform. Plot allocation followed closely at 30%, suggesting that allocation services are also gradually shifting to digital platforms. Title deed verification (22.5%) and other services (15%) were less frequently accessed, implying that while the system is functional for core land services, its integration with ancillary processes is still developing.

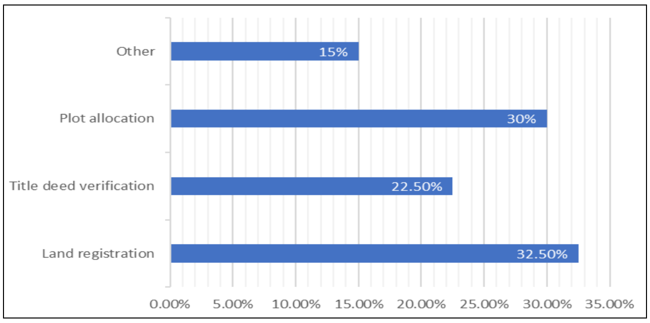

Fig 4.2.1: Type of Service Accessed

Findings show that 40% of respondents complete land-related transactions within 1–3 days using the E-governance system, while 35% take 4–7 days. Only 12.5% experience processing times longer than a week, showing that service delivery has become faster though not yet instantaneous.

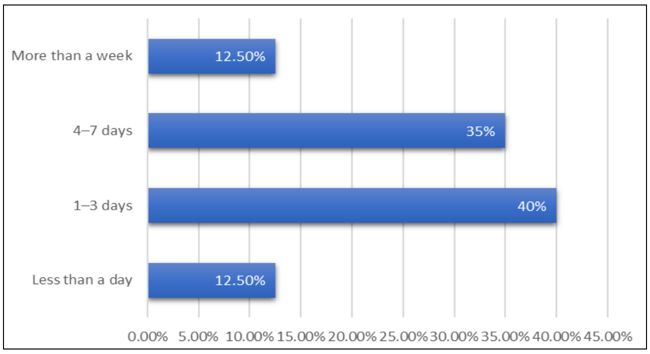

Fig 4.2.2: Processing Time

Speed of processing was the most improved service delivery aspect (37.5%), showing that automation and digital records have enhanced efficiency. Another 27.5% cited accuracy of records as a key improvement, reflecting better data management and reduced errors. However, only 12.5% identified staff responsiveness as a major improvement, suggesting that human interaction processes still lag behind technological progress.

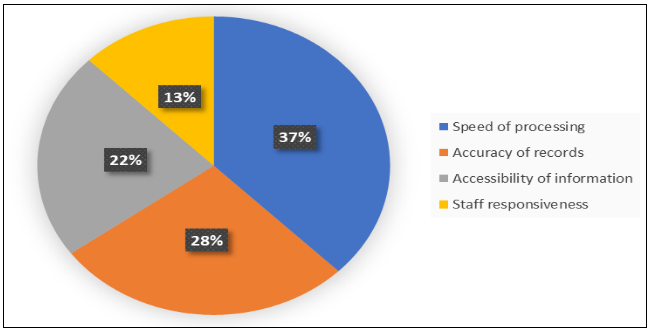

Fig 4.2.3: Improved Service Aspect

The online helpdesk (32.5%) was reported as the most effective communication channel for E-governance support. Phone calls (25%) and physical visits (22.5%) are still used, suggesting that hybrid communication systems remain necessary. Email (20%) was the least preferred, perhaps due to slower response rates.

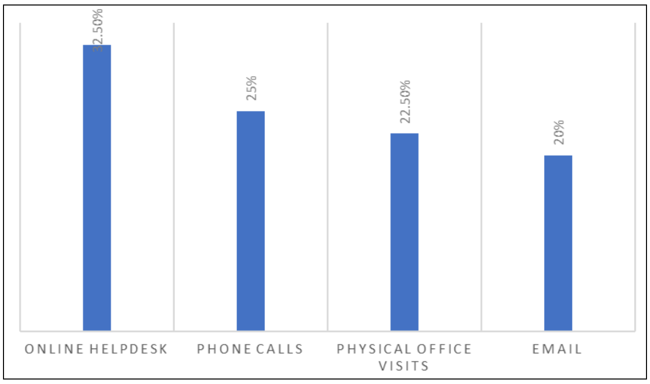

Fig 4.2.4: Communication Channel

Respondents' satisfaction with E-governance service delivery was most influenced by record accuracy (37.5%) and response time (35%). This implies that users value systems that deliver reliable data promptly. The user interface (12.5%) and staff interaction (15%) contributed less to satisfaction, showing that system design and interpersonal service still have room for improvement.

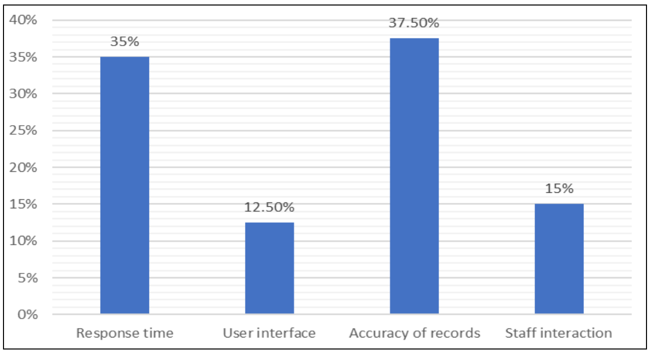

Fig 4.2.5: Satisfaction Factor

Approval bottlenecks were identified by 37.5% of respondents as the most frequent source of delay, suggesting that administrative approvals remain a weak link in the digital process. System downtime (27.5%) and data entry backlogs (20%) also contribute to inefficiencies. Only 15% reported no delays. This indicates that despite automation, bureaucratic procedures still limit full operational efficiency.

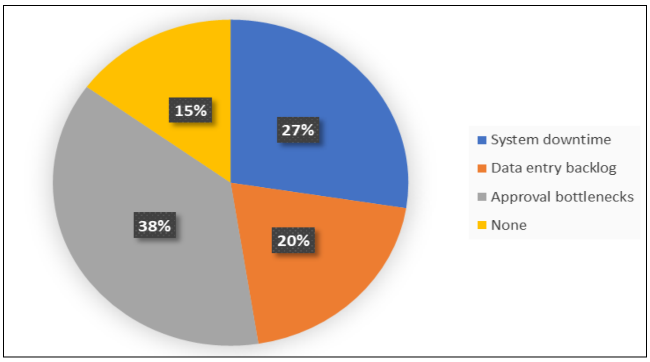

Fig 4.2.6: Common Delays

Technical support availability (32.5%) was seen as the most important factor improving user experience, followed by simplified procedures (27.5%). Training (22.5%) and regular updates (17.5%) were also valued but considered secondary. This implies that continuous support and user-friendly processes are critical for enhancing system usability.

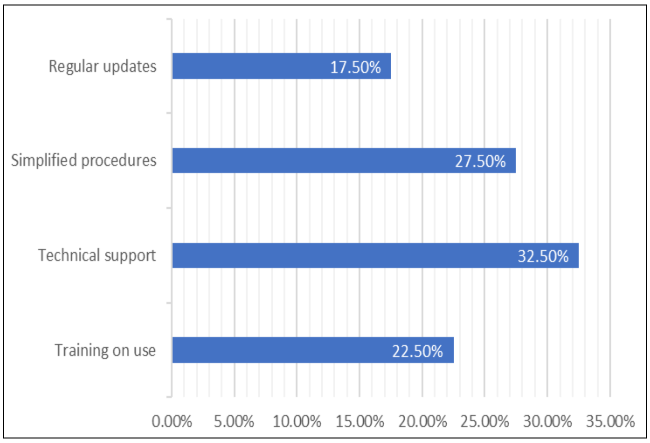

Fig 4.2.10: Support for User Experience

The Chi-square test revealed a statistically significant association between the frequency of interaction with the e-governance system and the frequency of system downtimes affecting service delivery ($\chi^2 = 87.474$, df = 6, $p < 0.001$).

Table 4.2.2: Association Between Frequency of Interaction with E-Governance System and System Downtimes Affecting Service Delivery

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	87.474[a]	6	.000
Likelihood Ratio	88.656	6	.000
Linear-by-Linear Association	50.514	1	.000
N of Valid Cases	80		

This suggests that how often users engage with the platform is related to how frequently they experience downtime disruptions. Similarly, a significant association was found between the perceived accessibility of the e-governance platform and client satisfaction with current service delivery ($\chi^2 = 88.656$, df = 6, $p < 0.001$), indicating that higher accessibility ratings are linked to greater satisfaction levels.

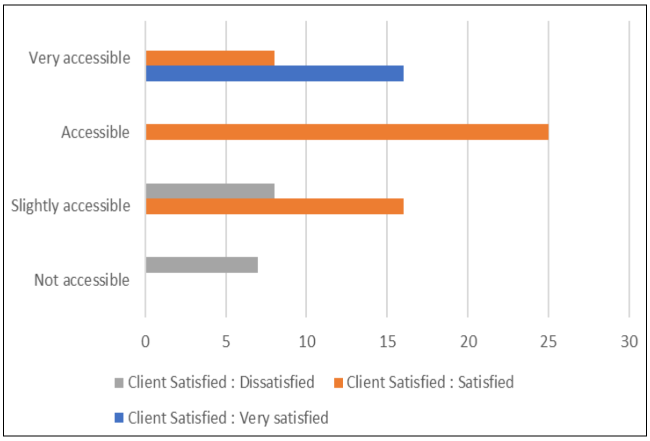

Fig 4.2.10: Association Between Frequency of Interaction with E-Governance System and System Downtimes Affecting Service Delivery

4.3 e-Governance and Operational Transparency

File retrieval was identified as the most efficient process (35%) under E-governance, reflecting the benefits of quick access to digital records. Data entry and service response improvements were moderate at 22.5% each. Record storage (20%) also showed improvement but less so, suggesting that efficiency gains are concentrated in data access rather than data entry or storage functions.

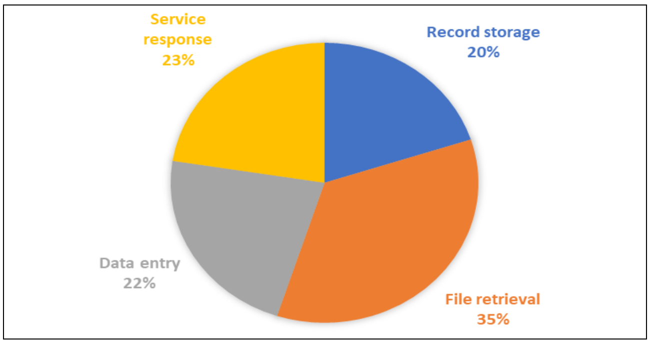

Fig 4.3.1: Efficient Operational Process

Task allocation remains largely manual (37.5%), even though 32.5% reported automated assignment. This mix suggests that the system has partial automation but still relies on supervisory discretion. Random and undefined task sharing (30% combined) further points to gaps in structured digital workflow management.

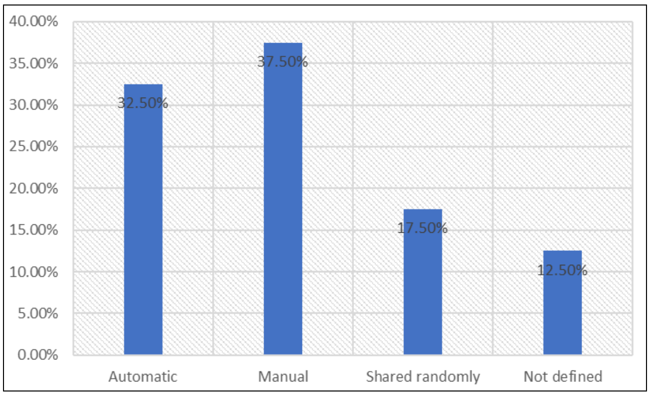

Fig 4.3.2: Task Assignment

The workflow dashboard (40%) was identified as the key coordination tool improving internal operations. This reflects a shift toward organized, data-driven management. Document management systems (27.5%) and internal messaging (17.5%) also contribute to efficiency, showing diversification in coordination tools.

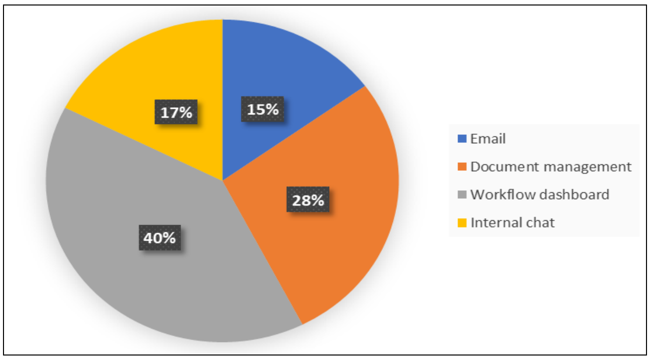

Fig 4.3.3: Coordination Tools

Better case tracking (35%) and faster response times (32.5%) were the main results of digital record management. Respondents observed that automation has reduced workload (20%) and minimized staff errors (12.5%). This confirms that digital record keeping has strengthened accountability and case follow-up mechanisms.

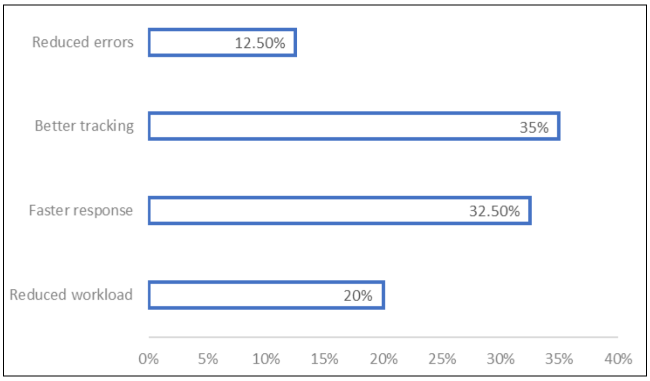

Fig 4.3.5: Outcome of Digital Record Management

Technical officers (35%) benefit most from E-governance tools, followed by surveyors and clerical staff (22.5% each). This pattern shows that digital systems primarily enhance the efficiency of those engaged in operational data handling rather than purely administrative tasks.

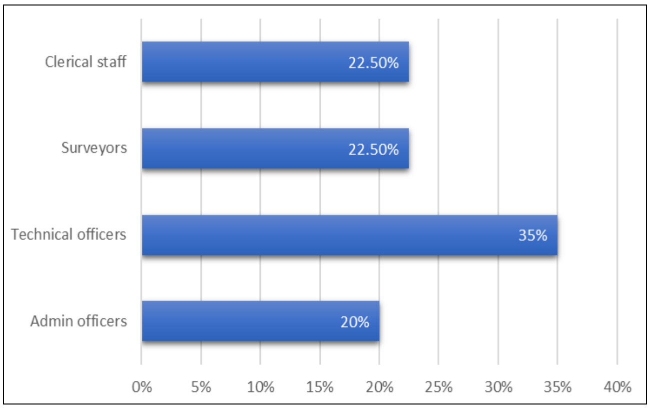

Fig 4.3.7: Benefiting Staff Group

Decision-making speed (35%) was identified as the least improved efficiency area, implying that E-governance has not yet translated into faster managerial decision processes. Error correction (30%) and communication flow (17.5%) also need improvement.

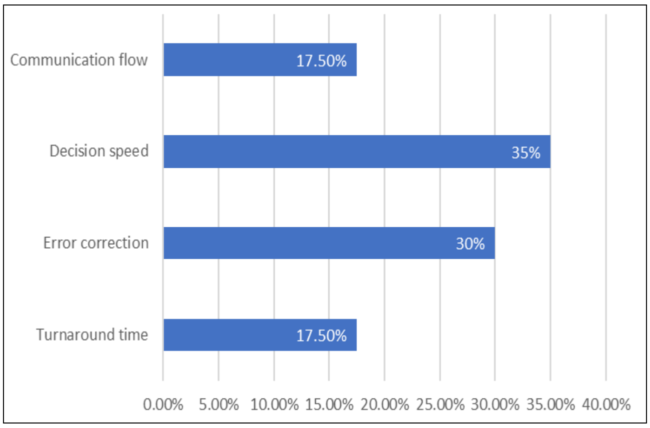

Fig 4.3.8: Least Improved Efficiency Area

Inadequate system training (35%) was the leading operational challenge, followed by technical errors (27.5%). This suggests that efficiency is limited by human capacity gaps rather than system design alone.

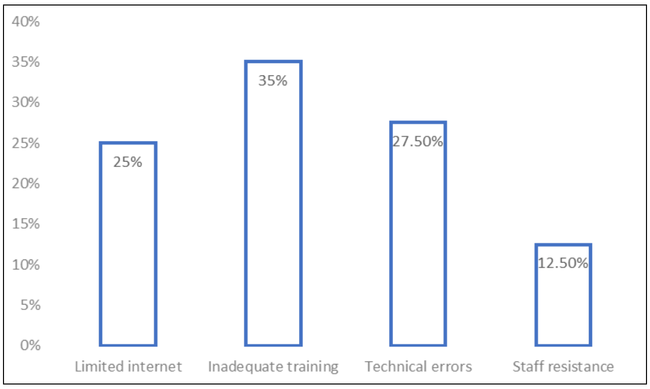

Fig 4.3.9: Efficiency Challenges

4.4 Role of E-governance in Transparency

The findings show that 37.5% of respondents identified application status as the most publicly accessible information through the E-governance platform, indicating that citizens can track the progress of their land applications with relative ease. Ownership details were cited by 27.5% of respondents, while fee schedules and policy documents were each mentioned by 17.5%.

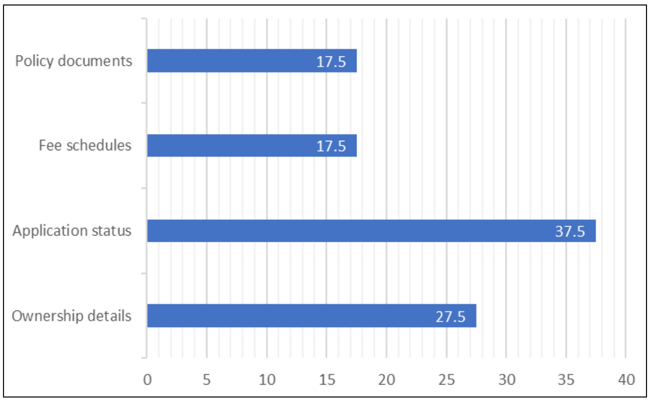

Fig 4.4.1: Publicly Accessible Information

The online portal was the most frequently used channel for updates, reported by 42.5% of respondents, reflecting a strong reliance on digital platforms for timely information. Email notifications (25%) and notice boards (17.5%) continue to play supporting roles, while social media (15%) is less commonly used.

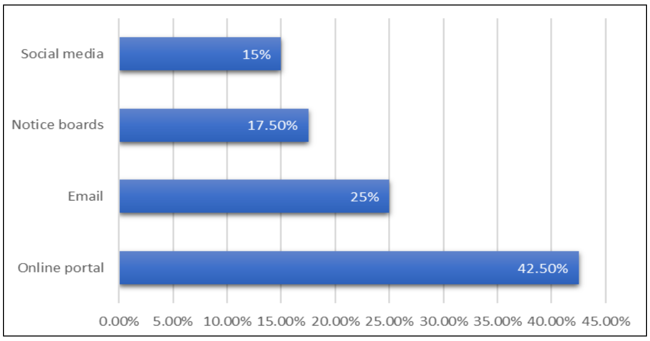

Fig 4.4.2: Communication of Updates

Respondents identified the complaint system as the most prominent accountability feature (35%), suggesting that mechanisms for lodging and tracking grievances are active and visible. Audit trails (25%) and receipts (22.5%) were also acknowledged, while public reporting (17.5%) was less noted.

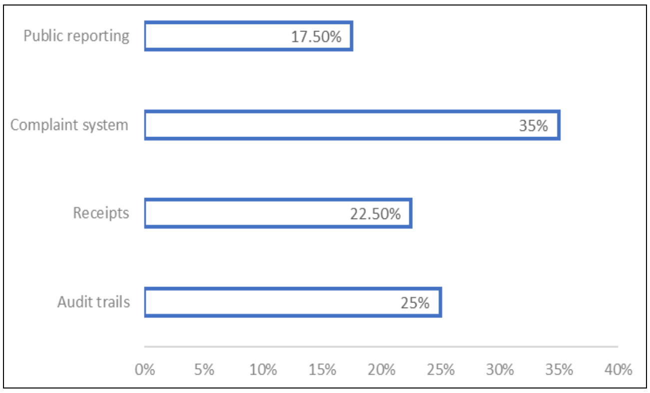

Fig 4.4.3: Accountability Feature

Digital tools were the primary method for verifying land information, used by 45% of respondents. This indicates a significant shift toward self-service verification and reduced dependency on physical office visits, intermediaries, or written requests, which were cited by 20%, 17.5%, and 17.5%, respectively.

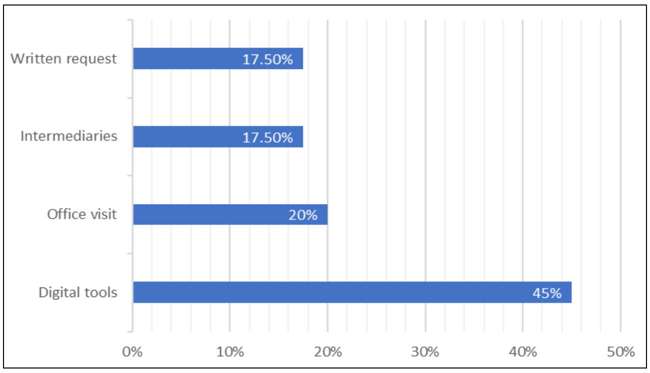

Fig 4.4.4: Verification Method

Automated activity logs were reported by 37.5% of respondents as the main method for monitoring staff actions, demonstrating that E-governance has improved oversight by providing real-time tracking of employee activities. Periodic audits (27.5%) and manual reviews (22.5%) supplement automation, while 12.5% indicated no monitoring exists.

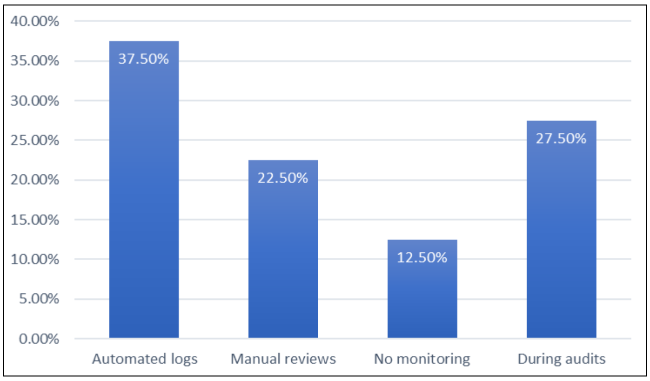

Fig 4.4.5: Staff Monitoring

Record manipulation was identified as the corruption risk most reduced by E-governance (32.5%), followed by delayed service delivery (27.5%) and unauthorized allocation (25%). Fee misappropriation was cited by only 15%. These results indicate that digitization has successfully addressed certain integrity risks, particularly related to record handling, but other corruption risks persist, highlighting the importance of complementary anti-corruption measures alongside digital tools.

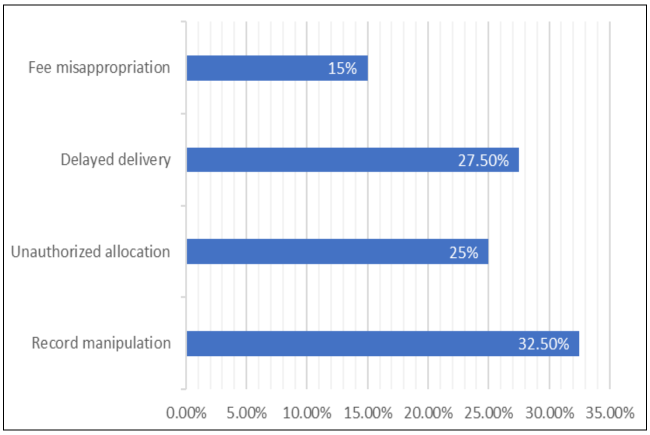

Fig 4.4.6: Reduced Corruption Risk

Citizens were reported as the primary beneficiaries of improved transparency (42.5%), followed by land officers (25%). Policy makers and surveyors benefited less, at 17.5% and 15%, respectively. This suggests that the E-governance system's transparency measures are largely citizen-focused, enhancing public confidence and access to information, while internal stakeholders benefit to a lesser extent.

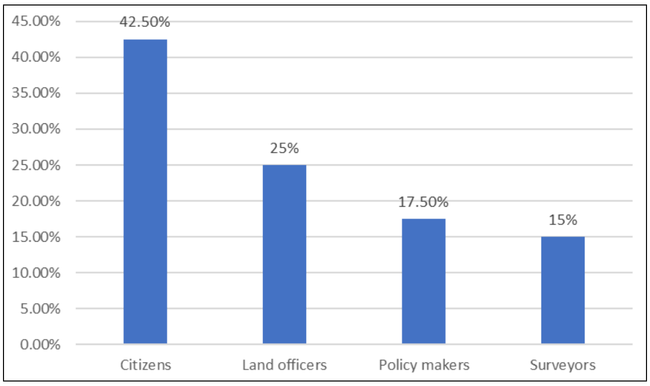

Fig 4.4.7: Group Benefiting Most

Complaint tracking was identified as the transparency area most needing improvement (32.5%), followed by public data access (27.5%) and record verification systems (25%). Fee disclosure was the least cited gap (15%). This indicates that while the system captures complaints and provides access to information, there are still weaknesses in tracking responses, verifying records, and ensuring that users can fully exercise transparency rights.

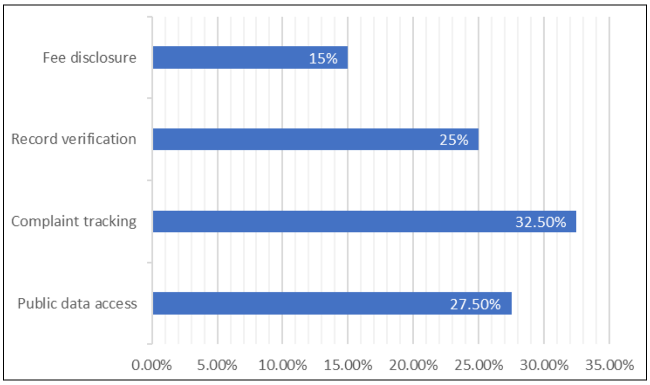

Fig 4.4.10: Transparency Gap

4.5 Challenges in Implementing E-Governance

System downtime was reported as the most frequent technical challenge, with 32.5% of respondents indicating it as a significant barrier. Slow connectivity (27.5%) and software errors (22.5%) were also notable challenges, while data loss affected 17.5%.

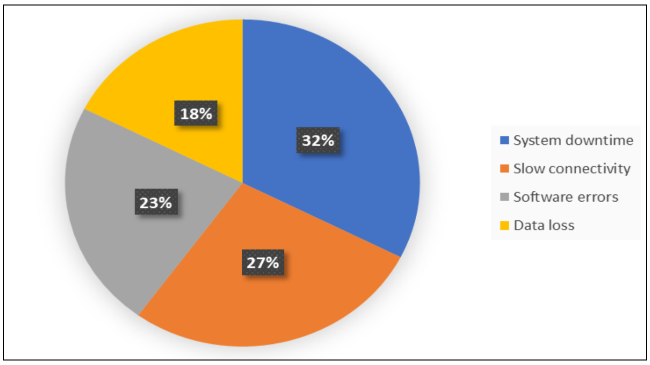

Fig 4.5.1: Technical Challenge

Limited staff capacity was identified by 35% of respondents as the key organizational factor limiting E-governance adoption, followed by inadequate funding (25%), weak policy enforcement (22.5%), and limited leadership support (17.5%). This indicates that human resource constraints are the most critical bottleneck to effective system use.

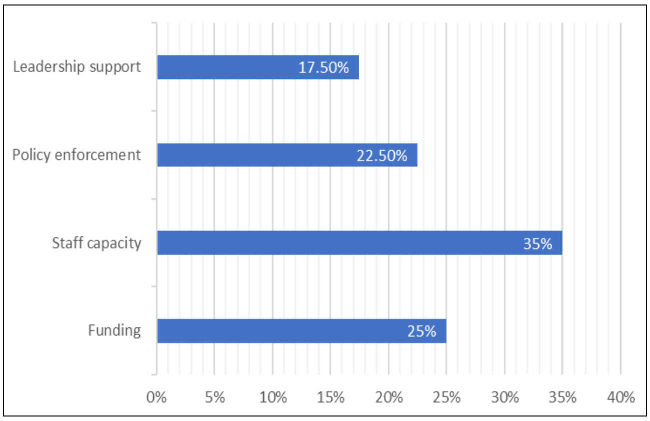

Fig 4.5.2: Organizational Limitation

Training for system users was most commonly provided as a one-time induction, reported by 30% of respondents. Regular scheduled sessions (27.5%) and on-demand support (25%) were less common, while 17.5% indicated that training is not provided.

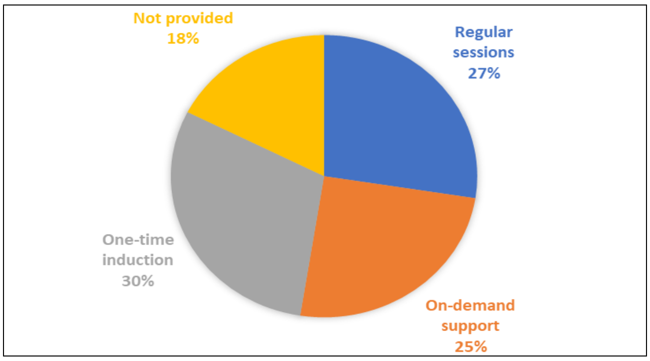

Fig 4.5.3: Training Provision

Preference for manual systems was the leading form of resistance to E-governance, cited by 35% of respondents. Reluctance to adopt technology (25%) and lack of confidence (22.5%) also contributed to resistance, while fear of accountability was less frequently reported (17.5%). These findings indicate that cultural and behavioral factors play a significant role in slowing the adoption of digital systems.

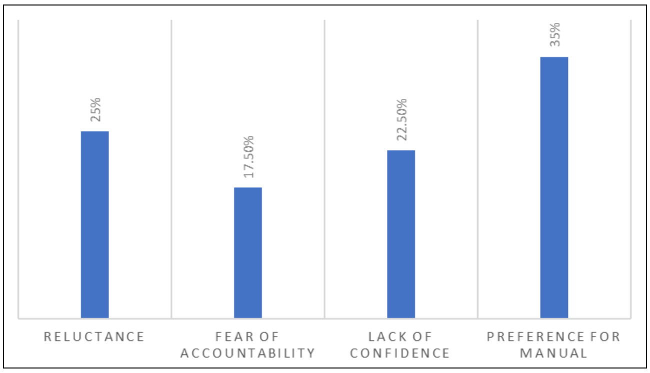

Fig 4.5.4: Form of Resistance

Internet instability was reported by 37.5% of respondents as the most critical infrastructure gap affecting system functionality. Power supply issues (27.5%), outdated equipment (22.5%), and limited storage capacity (12.5%) were also noted. These findings imply that technical infrastructure remains a key constraint to E-governance effectiveness, emphasizing the need for reliable connectivity, adequate hardware, and consistent power supply to support uninterrupted service delivery.

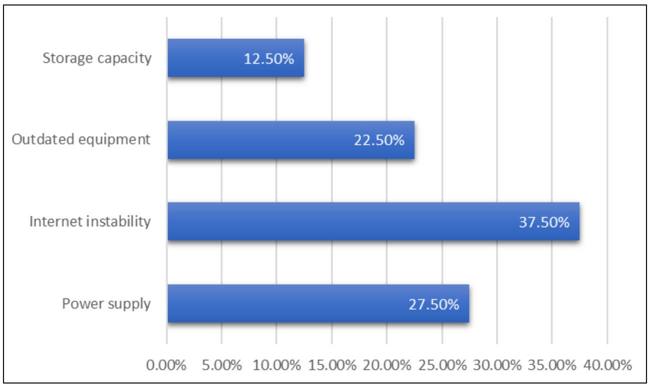

Fig 4.5.5: Infrastructure Gap

Maintenance of the E-governance system is primarily handled by internal ICT staff, as reported by 37.5% of respondents. External consultants (25%) and joint management (22.5%) also play roles, while 15% indicated that maintenance is not routinely handled.

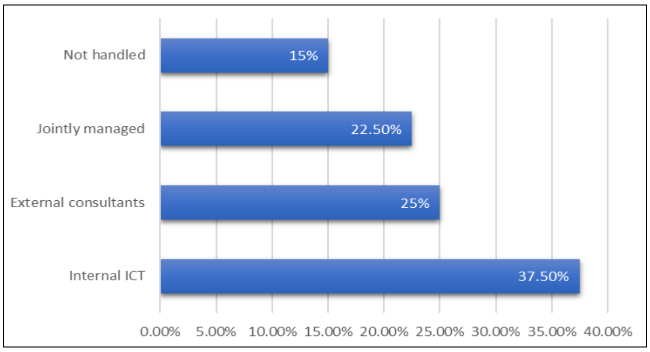

Fig 4.5.6: Maintenance Approach

Staff meetings were the most common mechanism for collecting feedback, as noted by 32.5% of respondents, followed by social media (30%) and online forms (25%). Physical complaint boxes were least used (12.5%). This pattern shows that feedback is primarily gathered through internal discussions and digital platforms.

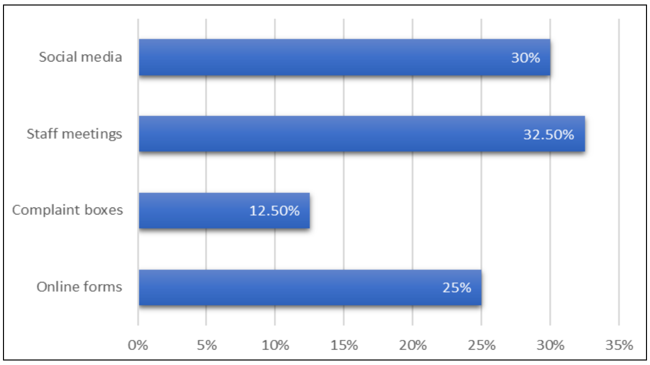

Fig 4.5.8: Feedback Collection

Technical system failure (32.5%) was identified as the challenge with the strongest impact on service delivery, followed by bureaucratic delays (27.5%) and staff attitudes (25%). Inconsistent funding (15%) was the least cited challenge. These results indicate that technological reliability is critical to maintaining service efficiency and that operational bottlenecks and human factors also significantly affect performance.

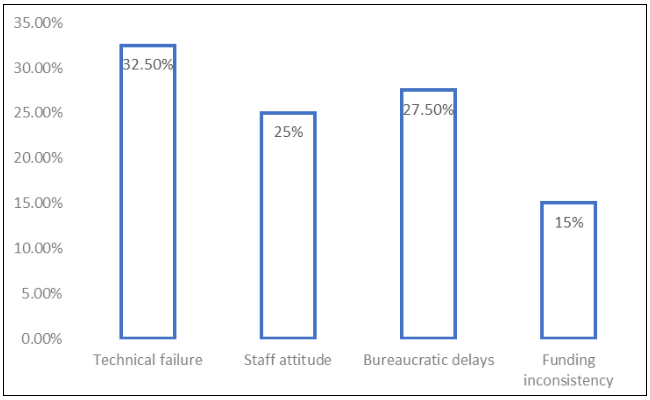

Fig 4.5.9: Most Impactful Challenge

Respondents identified policy reform (37.5%) as the most needed strategy to support sustainable E-governance implementation, followed by infrastructure investment (35%) and staff training (27.5%). This suggests that while technical and human resource improvements are important, establishing clear, enforceable policies and institutional frameworks is essential for long-term system sustainability and effectiveness.

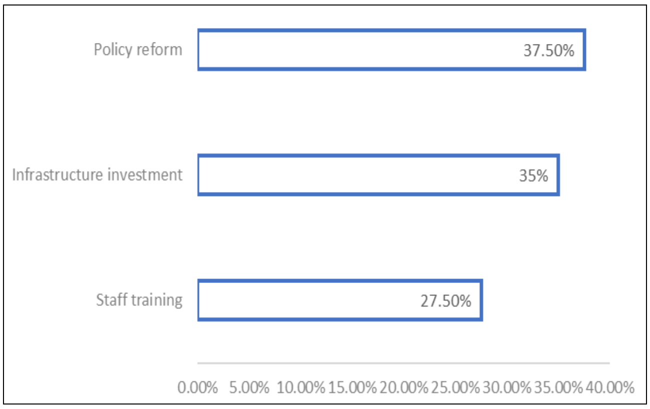

Fig 4.5.10: Needed Improvement Strategy

5. Discussion

The study found that e-governance has significantly improved service delivery, accountability, and transparency in the Land Record Unit. Digital systems reduced transaction times, with 40% of respondents completing land services within 1–3 days, increased record accuracy, and enhanced accessibility through online platforms, though some citizens still rely on physical visits or calls due to the digital divide. E-governance fosters accountability by digitizing transactions, creating audit trails, and enabling citizen participation in monitoring government actions, while also promoting transparency through integrated systems, real-time access to records, and reduced human discretion. Despite these benefits, implementation challenges persist, including inadequate ICT infrastructure, power supply issues, cybersecurity risks, limited technical capacity, high costs, bureaucratic resistance, and weak legal frameworks, which constrain full adoption and efficiency of e-governance initiatives. Overall, while e-governance has improved efficiency, cost-effectiveness, and citizen satisfaction, sustainable impact requires addressing technological, institutional, and regulatory barriers.

6. Conclusion

The study examined the effectiveness of e-governance in the Ministry of Local Government's Land Records Unit, focusing on service delivery, operational transparency, and implementation challenges. Results show that e-governance has improved access to key land services, particularly land registration (32.5%) and plot allocation (30%). Most transactions are completed within a week, and speed of processing (37.5%) and record accuracy (27.5%) emerged as the most improved service aspects. The online helpdesk (32.5%) was the main support channel, and satisfaction was largely driven by record accuracy (37.5%) and response time (35%). However, approval bottlenecks (37.5%) and system downtime (27.5%) continue to slow operations. Statistical analysis confirmed significant relationships between system interaction frequency and downtime (χ^2 =

87.474, $p < 0.001$), and between accessibility and user satisfaction ($\chi^2 = 88.656$, $p < 0.001$), showing that higher engagement and accessibility enhance service outcomes. In terms of operational transparency, file retrieval (35%) and workflow dashboards (40%) have improved efficiency, though decision-making speed (35%) and training gaps (35%) remain constraints. The system has enhanced accountability through features such as complaint tracking (35%) and automated activity logs (37.5%), reducing corruption risks related to record manipulation (32.5%). Citizens (42.5%) were the main beneficiaries of improved transparency, though complaint tracking (32.5%) and public data access (27.5%) still need improvement. Implementation challenges include frequent system downtimes (32.5%), limited staff capacity (35%), and weak infrastructure, particularly unstable internet (37.5%) and power supply (27.5%). Resistance to technology, driven by preference for manual systems (35%), further constrains adoption. While internal ICT staff manage most system maintenance (37.5%), continuous user training and stronger institutional policies are limited. Respondents identified policy reform (37.5%) and infrastructure investment (35%) as key strategies for sustainable implementation. Overall, the findings indicate that e-governance has strengthened efficiency, accuracy, and transparency in land service management but remains limited by technical, institutional, and human capacity challenges that require targeted policy and infrastructural interventions.

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8. References

1. Abdulnabi SM. Issues and challenges of implementing e-governance in developing countries: A comprehensive analysis of civil service models. Cogent Business & Management. 2024; 11(1):p.2340579.
2. Al-Busmait AJ, Mah'd OA, Mardini GH. The impact and challenges of e-governance in educational institutions: A systematic literature review. International Journal of Management in Education. 2025; 19(3):241-262.
3. Alhassan GS. E-governance for sustainable development in Ghana: Issues and prospects, 2020.
4. Atiq E, Salim M, Mahmood N. E-Governance: A Global Perspective on a New Paradigm. Journal of Law, Social and Management Sciences. 2023; 2(2):100-107.
5. Balaji K. E-Government and E-Governance: Driving Digital Transformation in Public Administration. Public Governance Practices in the Age of AI, 2025, 23-44.
6. Batool S, Gill SA, Javaid S, Khan AJ. Good governance via E-Governance: Moving towards digitalization for a digital economy. Review of Applied Management and Social Sciences. 2021; 4(4):823-836.
7. Bwalya KJ. Decolonization of e-Government Research and Practice, 2019.
8. Chilembo Z. A review of the successes and challenges of coordination and collaboration in the implementation of e-government programmes: A case of Zambia, 2021.
9. Copestake J. Mixed-methods impact evaluation in international development practice: Distinguishing between quant-led and qual-led models. Journal of Development Effectiveness. 2025; 17(1):1-20.
10. Froehlich A, Ringas N, Wilson J, Froehlich A, Ringas N, Wilson J. E-Governance in Africa and the World. Space Supporting Africa: Volume 3: Security, Peace, and Development through Efficient Governance Supported by Space Applications, 2020, 53-124.
11. Fröhlich K. Development of a citizen-centric e-government model for effective service delivery in Namibia (Doctoral dissertation, Namibia University of Science and Technology), 2019.
12. Gil O, Cortés-Cediel ME, Cantador I. Citizen participation and the rise of digital media platforms in smart governance and smart cities. In Research Anthology on Citizen Engagement and Activism for Social Change. IGI Global Scientific Publishing, 2022, 1186-1202.
13. Grigalashvili V. E-government and E-governance: Various or Multifarious Concepts. International Journal of Scientific and Management Research. 2022; 5(1):183-196.
14. Idzi FM, Gomes RC. Digital governance: Government strategies that impact public services. Global Public Policy and Governance. 2022; 2(4):427-452.
15. Kafusha H. An empirical correlational study on Zambia Revenue Authority (ZRA) electronic-tax system and adoption levels among small scale enterprises in Kalingalinga township of Lusaka district, Zambia (Doctoral dissertation, The University of Zambia), 2022.
16. Khadka SHIVA. Effectiveness and barriers of E-governance in public service delivery of Kathmandu metropolitan city (Doctoral dissertation, Faculties of Humanities and Social Sciences, Tribhuvan University, Nepal), 2024.
17. Klochan V, Piliaiev I, Sydorenko T, Khomutenko V, Solomko A, Tkachuk A. Digital Platforms as a tool for the transformation of strategic Consulting in Public Administration. Journal of Information Technology Management. 2021; 13(Special Issue: Role of ICT in Advancing Business and Management):42-61.
18. Kumar DP. The Impact of Digital Technologies on E-Governance: A Comprehensive Analysis. In International Working Conference on Transfer and Diffusion of IT. Cham: Springer Nature Switzerland, December 2023, 367-378.
19. Liywalii E. Analyzing the impact of ethical issues in e-government implementation: A case of Zambia (Doctoral dissertation, The University of Zambia), 2019.
20. Lyulyov O, Pimonenko T, Saura JR, Barbosa B. How do e-governance and e-business drive sustainable development goals? Technological Forecasting and Social Change. 2024; 199:p.123082.
21. Mataka B, Mungulube C. Exploring the Implementation of E-governance at the Road Transport and Safety Agency: A case study of Ndola Office Zambia, 2020.
22. Matlala LS. E-governance in South Africa: barriers and enablers of virtual evaluation in the public sector.

Insights into Regional Development. 2025; 7(2):84-108.
23. Mukanu GM. Assessing the usage of e-government systems in Zambia: A government employee perspective (Doctoral dissertation, University of Zambia), 2020.
24. Muparadzi T. Rethinking E-Government Implementation in Zimbabwe: Evidence and Lessons From Selected Country Cases. In Digital Technologies for a Resource Efficient Economy. IGI Global, 2024, 1-22.
25. Obiageli OH, Anthony UO, Junior CDC. E-governance and service delivery in the Nigeria civil service. World Journal of Innovative Research (WJIR). 2020; 9(3):49-49.
26. Oliveira TA, Oliver M, Ramalhinho H. Challenges for connecting citizens and smart cities: ICT, e-governance and blockchain. Sustainability. 2020; 12(7):p.2926.
27. Pandey JK. Public trust and collaborative e-governance performance: A study on government institutions and services. Transforming Government: People, Process and Policy. 2023; 17(4):510-531.
28. Refat N, Patwary M, Rahman MA. Digital Inclusion Towards e-Governance: Challenges and Issues. Human Data Interaction, Disadvantage and Skills in the Community: Enabling Cross-Sector Environments for Postdigital Inclusion, 2023, 135-150.
29. Samsor AM. Challenges and Prospects of e-Government implementation in Afghanistan. International Trade, Politics and Development. 2021; 5(1):51-70.
30. Secinaro S, Brescia V, Iannaci D, Jonathan GM. Does citizen involvement feed on digital platforms? International Journal of Public Administration. 2022; 45(9):708-725.
31. Sharmin S, Chowdhury RH. Digital transformation in governance: The impact of e-governance on public administration and transparency. Journal of Computer Science and Technology Studies. 2025; 7(1):362-379.
32. Sikaonga S, Tembo S. E-Government readiness in the civil service: A case of Zambian ministries. International Journal of Information Science. 2020; 10(1):15-28.
33. Singh A. E-governance: Moving towards digital governance. Vidya-A Journal of Gujarat University. 2023; 2(1):204-215.
34. Tennakoon WDNSM. E-governance way forward: Challenges and opportunities for developing countries. Evidences from Sri Lanka. International Journal of Business, Economics and Law. 2020; 21(2):51-61.
35. Troitiño DR, Mazur V, Kerikmäe T. E-governance and integration in the European union. Internet of Things. 2024; 27:p.101321.
36. Verma SK, Singh V. Designing a Conceptual Framework for Recommendation of E-Governance Implementation in Nepal: Barriers and Challenges. Journal of Information Systems Engineering and Management. 2025; 10(39s).