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HARNESSING THE INTERNET FOR SERVICE DELIVERY, TRANSPARENCY & ACCOUNTABILITY IN UGANDA

Investigating the Potential of Internet Usage to Enhance Service Delivery and Promote Transparency and Accountability in Uganda's Government Ministries, Departments, and Agencies

Evidence and Methods Lab (EML) is a civic tech initiative dedicated to simplifying, visualizing, and disseminating information while systematically gathering evidence through rigorous measurement and analysis. Focusing on the thematic areas of public accountability and anti-corruption, human rights promotion, election conflict and violence prevention, and climate change, Evidence and Methods Lab (EML) is dedicated to enhancing social justice and governance. EML seeks to break down barriers to information access by simplifying complex data and making it easily understandable for diverse audiences. Working closely with grantmakers and clients, EML continues to expand its reach, driving impactful work that informs policy-making, enhances public discourse, and improves service delivery in Uganda, with plans to gradually expand its influence regionally across Africa. Every initiative undertaken by EML contributes to building equitable and accountable societies, reinforcing the core values of transparency, justice, and governance.

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This report is an output of a project funded by the Internet Society Foundation. We hope that the findings and recommendations from this research will contribute to meaningful discussions, inform evidence-based policy-making, and inspire actions to improve governance in Uganda through the strategic use of the Internet.

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List of Acronyms

AFROSAI-E	African Association of English-Speaking Supreme Audit Institutions
AYG	Ask Your Government (online platform)
CAO	Chief Administrative Officer
CIPESA	Collaboration on International ICT Policy for East and Southern Africa
EML	Evidence and Methods Lab
FGD	Focus Group Discussion
GAPR	Government Annual Performance Report
GCIC	Government Citizen Interaction Centre
GEA	Government Enterprise Architecture
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit (German Development Agency)
ICT	Information and Communication Technology
KII	Key Informant Interview
MDAs	Ministries, Departments, and Agencies
NBI/EGI	National Data Transmission Backbone Infrastructure and e-Government Infrastructure
NDPIII	National Development Plan III
NITA-U	National Information Technology Authority - Uganda
OGP	Open Government Partnership
OPM	Office of the Prime Minister
RDC	Resident District Commissioner
UCC	Uganda Communications Commission
UDAP-GovNet	Uganda Digital Acceleration Project-GovNet
UIA	Uganda Investment Authority
UN	United Nations
UNDP	United Nations Development Programme
UNRA	Uganda National Roads Authority
UPTC	Uganda Posts and Telecommunications Corporation
URA	Uganda Revenue Authority
URSB	Uganda Registration Services Bureau
UTL	Uganda Telecommunications Limited
WOUGNET	Women of Uganda Network

Executive Summary

This report presents the findings and recommendations of a two-year action research project titled "Investigating the Potential of Internet Usage to Enhance Service Delivery and Promote Transparency and Accountability in Uganda's Government Ministries, Departments, and Agencies (MDAs) and Local Governments." Funded by the Internet Society Foundation and implemented by the Evidence and Methods Lab (EML) in collaboration with the Internet Society Uganda Chapter and WOUGNET, the project aimed to explore and address the factors hindering the effective utilization of the Internet to improve governance in Uganda.

Action research, a participatory and iterative methodology, was central to this project's design. Unlike traditional research approaches, action research emphasizes collaboration and practical problem-solving. This project uniquely employed an action research design, working directly with government officials, civil society organizations, community leaders, and citizens to:

1. Identify and analyze the challenges and opportunities related to e-governance adoption in Uganda.
2. Co-create and pilot innovative solutions to address the identified challenges.
3. Build capacity among stakeholders to effectively utilize and promote e-governance.
4. Continuously learn and adapt the project's interventions based on real-time data and feedback.
5. Generate evidence-based recommendations to inform policy and practice.

The project aimed to explore and address the factors hindering the effective utilization of the Internet to improve governance in Uganda.

The project employed a mixed-methods approach, combining quantitative data collection (surveys, adapted GAPR scorecards, eGov Quality Analyzer) with qualitative methods (Key Informant Interviews, Focus Group Discussions, stakeholder workshops) to gain a comprehensive understanding of the e-governance landscape in Uganda. The research focused on four key outcomes:

1. **Outcome 1:** Evidence-based policy guidance on the utilization of internet services for service delivery and sharing accountability information.
2. **Outcome 2:** Informed citizenry demanding for accountability in service delivery using platforms on the internet.
3. **Outcome 3:** Central and local government entities become more responsive to information demands by citizens.
4. **Outcome 4:** Innovative approaches and methodologies developed for activating the supply and demand sides of accountability.

Key Findings

The baseline assessment revealed significant challenges to e-governance adoption in Uganda, including a persistent digital divide, particularly affecting rural communities; limited digital literacy among citizens and public servants; inadequate ICT infrastructure in many areas; and a complex policy and regulatory environment. Many government online platforms suffered from poor usability, accessibility, and security issues. Stakeholder consultations highlighted a strong desire for improved service delivery and enhanced transparency and accountability, but also revealed concerns about data privacy, potential for misuse of online platforms, and resistance to change within some government agencies.

The project implemented a range of iteratively designed and refined interventions, including capacity-building workshops for government officials, the training of community internet champions to promote digital literacy and assist citizens in accessing online services, an e-governance innovation challenge that resulted in 9 pilot innovations, and the development and launch of the Faayo citizen feedback platform. The innovation challenge also resulted in the establishment of the Accountability Lab, which served as a collaborative forum.

Post-intervention data analysis demonstrated positive impacts across the four project outcomes:

1. **Outcome 1 (Evidence-Based Policy Guidance):** The project generated substantial quantitative and qualitative data that informed the development of evidence-based policy recommendations. The research highlighted the need for a more holistic and integrated approach to e-governance, hyperlocal digital inclusion strategies, and a review of existing legislation like the Computer Misuse Act. The project engaged directly with policymakers through workshops and policy briefs to disseminate these findings.
2. **Outcome 2 (Informed Citizenry):** The project fostered a more informed citizenry. Quantitative data showed increased internet usage for accessing government services, particularly in rural areas, and improved digital literacy scores among those who interacted with community internet champions. Qualitative data highlighted increased citizen awareness of e-governance services and greater confidence in using online platforms. The Faayo platform also gained traction, collecting thousands of service reviews and complaints, demonstrating its potential for citizen engagement. The iterative nature of the action research project allowed for adjustments to the community internet champion training and the Faayo platform based on real-time feedback from users.
3. **Outcome 3 (Responsive Government Entities):** The project contributed to improved responsiveness of government entities. Quantitative data showed moderate improvements in adapted GAPR scores and increased response rates to online inquiries. Qualitative data indicated a greater openness to citizen feedback among government officials who participated in the capacity-building workshops. The project's interventions, by working directly with government agencies, helped to build their capacity to utilize e-governance tools and respond to citizen demands more effectively.
4. **Outcome 4 (Innovative Approaches):** The project successfully fostered innovation through the innovation challenge, the piloting of diverse solutions (ShareCARD, EMU platform, WOUGNET's application, etc.), and the establishment of the Accountability Lab. These initiatives demonstrated the feasibility and potential impact of locally developed e-governance solutions and fostered a collaborative environment for ongoing innovation. The action research methodology, with its emphasis on learning and adaptation, was crucial in enabling the project to identify and support promising innovations.

Challenges and Limitations

Despite the progress made, the project also encountered challenges. The digital divide remains a significant barrier to widespread e-governance adoption. Translating research findings into concrete policy changes proved to be a slow process. Resistance to change within some government entities and the need for more robust complaint resolution mechanisms were also identified. The project's timeframe and scope limited the ability to fully assess long-term impacts and address all the identified challenges comprehensively.

Key Recommendations:

This research underscores the transformative potential of e-governance in Uganda but highlights the need for a multi-faceted approach beyond technological solutions. The following key recommendations are proposed to enhance e-governance implementation and impact further:

1. **Prioritize Hyperlocal Digital Inclusion:** The project demonstrated the effectiveness of the community internet champion model in bridging the digital divide. It is recommended that this model be scaled up nationwide and integrated into existing local government structures, and ongoing training and support should be provided to champions. Furthermore, the government should explore innovative and context-specific solutions for expanding affordable internet access, such as supporting community-owned internet infrastructure and partnering with telecom companies to offer subsidized data packages for e-governance platforms.
2. **Strengthen Government Capacity for Responsive E-Governance:** Building on the success of the capacity-building workshops, it is recommended that a comprehensive "Responsive E-Governance Framework" be developed for all MDAs and local governments. This framework should include mandatory response time standards for online inquiries and complaints, clear protocols for handling citizen feedback, and mechanisms for integrating feedback into service improvement processes. Furthermore, a "Digital Leadership Program" should be implemented for senior government officials, focusing on change management, data-driven decision-making, and fostering a culture of innovation and citizen-centric service delivery.
3. **Foster a Sustainable Innovation Ecosystem:** The innovation challenge and the Accountability Lab demonstrated the potential for fostering a vibrant e-governance innovation ecosystem in Uganda. It is recommended that a dedicated "National E-Governance Innovation Fund" be established to support the development, piloting, and scaling up of innovative solutions, with a particular focus on solutions that address the needs of marginalized communities and leverage accessible technologies. The Accountability Lab should be transformed into a permanent "National E-Governance Innovation Hub" with regional chapters, providing ongoing support, resources, and networking opportunities for innovators.
4. **Strengthen the Policy and Regulatory Environment:** The project highlighted the need for a more enabling policy and regulatory environment for e-governance. It is recommended that the government establish a "Digital Rights Task Force" to review and propose amendments to legislation that may hinder e-governance or restrict online freedoms, such as the Computer Misuse Act. This task force should involve representatives from civil society, legal experts, and the private sector to ensure a balanced and inclusive approach. Furthermore, a comprehensive "E-Governance Data Governance Framework" should be developed and implemented to guide the collection, storage, use, and sharing of data by government agencies, going beyond the minimum requirements of the Data Protection and Privacy Act and incorporating international best practices.

1.0 Introduction

1.1 Background and Context

The Internet's transformative potential to revolutionize public service delivery and foster transparency and accountability has been widely recognized by governments globally (UN E-Government Survey, 2020; World Bank, 2021). In Uganda, this recognition has translated into a concerted effort to embrace digital governance, as evidenced by initiatives spanning from the liberalization of the telecommunications sector in the early 1990s to the establishment of the National Information Technology Authority Uganda (NITA-U) in 2009, and the more recent Uganda Digital Acceleration Project-GovNet (UDAP-GovNet). These initiatives reflect the aspirations outlined in Uganda's National Development Plan (NDPIII), which acknowledges the Internet as a critical enabler for sustainable development and improved service delivery.

Despite the progress made in developing ICT infrastructure, formulating policy frameworks, and implementing e-government services, Uganda still faces significant challenges in fully realizing the potential of internet-driven service delivery. While internet penetration has grown substantially, reaching over 25 million subscriptions in 2022 (UCC, 2023), a notable digital divide persists, particularly affecting rural communities and marginalized populations. Moreover, despite the existence of various e-government platforms and services, their utilization by citizens remains relatively low, hindered by factors such as limited digital literacy, inadequate ICT infrastructure in some areas, concerns about data privacy and security, and a lack of trust in online government services (Baguma & Mayende, 2017; Bwogi et al., 2016).

Furthermore, the policy and regulatory environment presents a complex landscape. While the government has introduced progressive legislation like the Data Protection and Privacy Act of 2019, concerns have been raised regarding the potential misuse of other laws, such as the Computer Misuse Act (2011, amended 2022) and the Anti-Terrorism Act (2002), to restrict online freedoms and suppress dissent. This highlights the need for a nuanced approach to policy-making that balances security concerns with protecting citizens' rights in the digital space.

Despite the progress made in developing ICT infrastructure, formulating policy frameworks, and implementing e-government services, Uganda still faces significant challenges in fully realizing the potential of internet-driven service delivery.

1.2 Problem Statement

The core problem this research project addresses is the underutilization of the Internet's potential to enhance transparency, accountability, and service delivery within Uganda's public sector, particularly at the local government level. Despite the government's commitment to e-governance and the increasing availability of online platforms, many government agencies, especially rural areas, are not fully leveraging the internet to engage with citizens, provide efficient services,

and promote openness. This is further compounded by limited citizen awareness and capacity to effectively utilize available e-government services and concerns surrounding data privacy, security, and the potential for misuse of online platforms for political interests. This research project investigates the reasons behind this gap between potential and practice.

1.3 Purpose and Objectives of the Study

This action research project, funded by the Internet Society Foundation and implemented by the Evidence and Methods Lab (EML) in collaboration with the Internet Society Uganda Chapter and WOUGNET, aimed to explore and address the factors hindering the effective utilization of the internet to enhance service delivery and promote transparency and accountability within Uganda's government Ministries, Departments, and Agencies (MDAs) and Local Governments. The project adopted a participatory, iterative approach, working directly with stakeholders to identify challenges, co-create solutions, and build local capacity to foster a more inclusive and responsive e-governance ecosystem.

The specific objectives of the study were:

a) To examine the role of the Internet in generating and disseminating evidence-based research to inform policy and decision-making regarding service delivery and accountability in Uganda's public sector, ultimately influencing government policy to embrace and embed Internet services within the delivery of services and accountability (Outcome 1).

b) To identify strategies and approaches for building civic capacity and promoting informed citizen engagement in demanding accountability through Internet-based platforms. This includes identifying and training community internet champions and establishing a platform for citizen engagement (Faayo), contributing directly to Outcome 2 (Informed Citizenry).

c) To assess the factors influencing central and local government entities' responsiveness to information demands by citizens in the context of Internet-enabled service delivery, thereby building the capacity of local governments to manage citizen feedback and contributing to Outcome 3 (Responsive Government Entities).

d) To explore innovative approaches and methodologies for activating the supply and demand sides of accountability in Internet-based initiatives and fostering collaboration among stakeholders. This involves implementing an innovation challenge and establishing an Accountability Lab, directly addressing Outcome 4 (Innovative Approaches).

1.4 Research Questions

This research sought to answer the following key questions:

a) What are the opportunities for utilizing the Internet to improve service delivery within Uganda's public sector, particularly at the local government level?

b) What are the capacity gaps hindering the utilization of the Internet by government agencies (both central and local) in their efforts to improve transparency and accountability in service delivery?

c) How can central and local government entities become more responsive to information demands by citizens through the utilization of the internet in service delivery?

d) What innovative approaches and methodologies can be developed to activate the supply and demand sides of accountability in internet-based initiatives, fostering greater citizen participation and government responsiveness?

1.5 Significance of the Study

This study is significant for several reasons. Firstly, it moves beyond a purely supply-side analysis of e-governance initiatives in Uganda by incorporating the demand-side perspective, focusing on citizens' needs, preferences, and experiences. Secondly, it adopts an action research approach, ensuring that the findings are directly translated into practical interventions and contribute to tangible improvements in e-governance practices. Thirdly, by focusing on both central and local government levels, the study provides a more comprehensive understanding of the e-governance landscape in Uganda. Fourthly, the project's emphasis on capacity building, innovation, and citizen engagement offers a model for fostering a more inclusive and participatory e-governance ecosystem. Finally, the study generates context-specific, evidence-based recommendations that can inform policy and practice, contributing to more effective and impactful e-governance initiatives in Uganda and potentially serving as a model for other developing countries. The findings of this research are particularly relevant for policymakers, government officials, civil society organizations, development partners, and researchers working in the field of e-governance and digital development. The study also contributes to the broader academic discourse on e-governance adoption in developing countries, offering insights into the complex interplay of technological, social, political, and economic factors that shape the success of digital transformation initiatives.

1.6 Scope and Limitations

This study focused on 13 districts in Uganda, selected to represent diverse geographical regions and varying levels of e-governance development: Gulu, Lira, Mbale, Pallisa, Jinja, Kampala, Masaka, Mbarara, Kabale, Fort Portal, Mityana, Hoima, and Arua City. While this provides a broad overview of the situation in Uganda, the findings may not be fully generalizable to all districts or to other countries. Though substantial, the project timeframe of two years limited the ability to fully assess the long-term impact of some interventions, particularly policy changes and the scaling up of innovations. The study primarily focused on the use of the internet for e-governance. It did not delve deeply into other ICTs, such as radio or television, which may also play a significant role in information dissemination and service delivery, especially in rural communities.

Furthermore, while the project aimed to be inclusive, certain marginalized groups may have been underrepresented due to logistical constraints or the challenges of reaching the most vulnerable populations. The study relied on self-reported data for some indicators, which may be subject to recall or social desirability bias. However, the triangulation of multiple data sources and methods helped to mitigate these limitations.

1.7 Structure of the Report

The remainder of this report is organized as follows: Section 2 reviews the relevant literature on e-governance, focusing on the themes of service delivery, transparency, accountability, capacity building, citizen engagement, and innovation. Section 3 outlines the action research methodology employed in this study, detailing the research design, data collection methods, and data analysis techniques. Section 4 presents the findings of the research, structured around the baseline assessment, the implementation of interventions, and the analysis of quantitative and qualitative data, with a focus on the project's four key outcomes. Section 5 discusses the implications of the findings for policy and practice and offers a set of key recommendations. Finally, Section 6 concludes the report by summarizing the key findings, highlighting the project's contributions, acknowledging limitations, and suggesting directions for future research.

2.0 Overview of Relevant Literature

This research project builds upon a substantial body of existing literature on e-governance, drawing insights from both global research and studies focused specifically on the context of developing countries, particularly in Sub-Saharan Africa. The literature reviewed provided a foundation for understanding the potential of the internet to transform public service delivery, enhance transparency and accountability, and foster citizen engagement. It also highlighted key challenges and success factors in e-governance implementation, informing the development of this project's conceptual model and research design.

2.1 Key Themes from the Literature

- **Transformative Potential of E-Governance:** The literature widely acknowledges the transformative potential of the internet to revolutionize public service delivery (Bertot et al., 2010; Jaeger & Thompson, 2003). Studies have shown that e-government portals can streamline processes, reduce administrative burdens (Bannister & Connolly, 2014), and improve access to services, particularly when coupled with one-stop-shop platforms that integrate various services (Dunleavy et al., 2006; Yildiz, 2007). Examples like Estonia's e-government platform and South Korea's e-People system demonstrate the potential for increased efficiency, transparency, and citizen participation (Kerem et al., 2017; Kim & Kim, 2017).
- **Transparency and Accountability:** A significant strand of research highlights the internet's role in promoting transparency and accountability in government (Hood, 2006; Bovens, 2007). Studies on open government data initiatives (Davies et al., 2013) and e-participation platforms (Macintosh, 2004) demonstrate how technology can facilitate information dissemination, citizen engagement, and monitoring of government performance. Case studies like Kenya's Ushahidi platform further illustrate the potential of internet-based tools to enhance accountability in challenging contexts (Ananny & Gaffney, 2015; Okolloh, 2009).

This research project builds upon a substantial body of existing literature on e-governance, drawing insights from both global research and studies focused specifically on the context of developing countries, particularly in Sub-Saharan Africa.

- **Capacity Gaps and Challenges:** The literature emphasizes that successful e-governance implementation requires addressing various capacity gaps, including inadequate ICT infrastructure, limited digital literacy, insufficient financial resources, and a lack of supportive legal and regulatory frameworks (Bwalya & Mutula, 2016; Hossain et al., 2009). Studies in Sub-Saharan Africa have highlighted the particular challenges of limited internet penetration, low broadband speeds, and high access costs (Gillwald et al., 2018). The importance of digital literacy training for both citizens and public servants is also underscored (Chigona & Licker, 2008; Van Deursen & Van Dijk, 2011).
- **Citizen Engagement and Responsiveness:** Research emphasizes the critical role of citizen engagement in effective e-governance (Macintosh, 2004; Gigler, 2011). Studies have shown that internet-based platforms can empower citizens to demand accountability in service delivery (Peixoto & Fox, 2016) and that government responsiveness to citizen information demands is crucial for successful e-governance initiatives (Grimmelikhuijsen et al., 2013). The importance of involving local government entities in the accountability chain is also highlighted (Olowu, 2003).
- **Innovation and Context-Specific Solutions: T**he literature highlights the need for innovative approaches to activate accountability's supply and demand sides (Peixoto & Fox, 2016). Case studies from across Africa, such as the Makueni County Open Contracting Portal in Kenya (Omenya & Lakin, 2017) and the BudgIT initiative in Nigeria (BudgIT, 2021), demonstrate the potential of innovative technologies and collaborative partnerships. Furthermore, the literature emphasizes the importance of adopting a holistic and context-specific approach to addressing capacity gaps, considering the unique social, economic, and political factors influencing internet adoption and use (Bwalya & Healy, 2010; Wagner et al., 2011).
- **Gaps in the Existing Literature:** While the literature provides valuable insights, several gaps remain. These include a limited focus on the demand side of internet-driven service delivery, particularly in Sub-Saharan Africa (Twinomurinzi & Ghartey-Tagoe, 2013). There is also a need for more research on the factors influencing the success of e-governance initiatives in promoting transparency and accountability in diverse socio-political contexts like Uganda (Baguma & Mayende, 2017; Bwogi et al., 2016). Furthermore, the evaluation of e-governance initiatives, the role of inter-agency collaboration, the challenges of the digital divide, data privacy, and security concerns, and the role of the private sector and civil society in e-governance require further exploration.

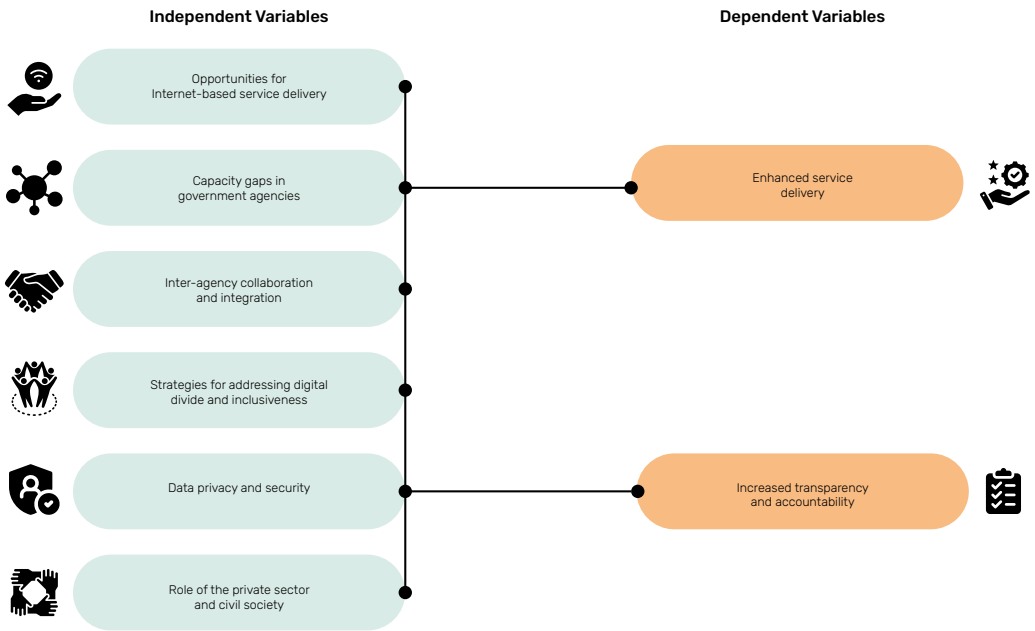
This action research project directly addresses these gaps by investigating both the supply and demand aspects of internet usage for enhancing service delivery and promoting transparency and accountability in Uganda's public sector. The study's findings contribute to a more comprehensive understanding of the challenges and opportunities associated with internet usage in Uganda's public sector, informing the development of contextually appropriate and sustainable e-governance solutions. The project's focus on capacity building, innovation, and citizen engagement, informed by the literature, provides a model for fostering a more inclusive and responsive e-governance ecosystem in Uganda and potentially serving as a model for other developing countries.

The study's findings contribute to a more comprehensive understanding of the challenges and opportunities associated with internet usage in Uganda's public sector, informing the development of contextually appropriate and sustainable e-governance solutions.

3.0 Conceptual Model

This research project is guided by a conceptual model (Figure 1) that depicts the hypothesized relationships between key factors influencing the potential of internet usage to enhance service delivery and promote transparency and accountability within Uganda's government Ministries, Departments, and Agencies (MDAs) and Local Governments. This model is grounded in established theories in public administration, e-governance, and information systems, including Principal-Agent Theory (Bovens, 2007), Diffusion of Innovations Theory (Rogers, 2003), Digital Divide Theory (Norris, 2001; Warschauer, 2003), and the concept of Citizen-Centric Governance (Yildiz, 2007). It also draws upon empirical evidence from the e-governance literature, particularly studies conducted in the context of developing countries (Heeks, 2002; Ndou, 2004; Dada, 2006).

Figure 1. Conceptual Model of E-Governance Adoption and Impact in Uganda



As depicted in Figure 1, the independent variables, positioned on the model's left side, represent the factors expected to influence the outcomes. These include:

- **Opportunities for Internet-Based Service Delivery:** The inherent potential of the Internet to streamline processes, improve accessibility, enhance citizen engagement, and reduce the administrative burden on both government and citizens (Meijer et al., 2012; Bannister & Connolly, 2014; Dunleavy et al., 2006). This encompasses the availability of online platforms, the range of services offered digitally, and the potential for 24/7 access to government information and services.
- **Capacity Gaps in Government Agencies:** The limitations within MDAs and local governments hinder the effective utilization of the Internet. These include infrastructural constraints (e.g., limited internet connectivity, lack of appropriate hardware), lack of digital skills among staff, inadequate financial resources, and organizational resistance to change (Heeks, 2002; Ndou, 2004).

- **Inter-Agency Collaboration and Integration:** The degree to which government agencies can effectively collaborate, share data, and integrate their systems to provide seamless online services. This includes developing and implementing interoperability standards and data-sharing protocols (Layne & Lee, 2001).
- **Strategies for Addressing the Digital Divide and Inclusiveness:** Measures taken to ensure equitable access to the Internet and e-governance services, particularly for marginalized populations and those in rural areas. This includes initiatives to improve internet affordability, promote digital literacy, and develop localized content (Norris, 2001; Warschauer, 2003).
- **Data Privacy and Security:** The policies, regulations, and technical measures implemented to protect the privacy and security of citizens' data in the context of e-governance, including compliance with the Data Protection and Privacy Act of 2019 (Bélanger & Carter, 2008; Luna-Reyes & Gil-Garcia, 2014).
- **Role of the Private Sector and Civil Society:** The contributions of non-governmental actors, including private sector companies and civil society organizations, in promoting internet access, digital literacy, citizen engagement, and innovation in e-governance (Fountain, 2001; Dunleavy et al., 2006).

The dependent variables, positioned on the right side of the model, represent the desired outcomes of the project:

- **Enhanced Service Delivery:** Improvements in the efficiency, effectiveness, accessibility, and responsiveness of public services delivered through online platforms (Bannister & Connolly, 2011). This includes reduced processing times, increased citizen satisfaction, and greater convenience in accessing services.
- **Increased Transparency and Accountability:** Greater openness in government operations, decision-making processes, and the use of public resources, coupled with mechanisms for holding government officials accountable (Peixoto & Fox, 2016). This includes the proactive disclosure of information, clear procedures for citizen feedback and complaints, and online platforms to monitor government performance.

The arrows in the model illustrate the hypothesized relationships between these variables. For instance, addressing capacity gaps in government agencies, such as improving digital literacy among staff and investing in ICT infrastructure, is expected to enhance service delivery. Similarly, greater inter-agency collaboration and data integration are hypothesized to improve the efficiency and effectiveness of online services by enabling seamless information flow and reducing duplication of effort.

This conceptual model serves as a roadmap for the research, guiding the data collection and analysis process. It provides a framework for understanding the complex interplay of factors that influence the success of e-governance initiatives and for assessing the impact of the project's interventions on the desired outcomes. The model also highlights the importance of considering supply-side factors (e.g., government capacity, infrastructure) and demand-side factors (e.g., citizen needs, digital literacy) in designing and implementing effective e-governance solutions. The subsequent methodology section will detail the specific methods used to operationalize and measure these variables and to test the hypothesized relationships. The findings, analyzed through the lens of this model, will contribute to a deeper understanding of how to effectively leverage internet usage to improve service delivery and governance in Uganda's public sector.

The model also highlights the importance of considering supply-side factors (e.g., government capacity, infrastructure) and demand-side factors (e.g., citizen needs, digital literacy) in designing and implementing effective e-governance solutions.

4.0 Methodology

This study employed a comprehensive, triangulated action research methodology to investigate the potential of Internet usage in enhancing service delivery and promoting transparency and accountability within Uganda's government ministries, departments, and agencies (MDAs) and Local Governments. The research design integrated quantitative and qualitative data collection and analysis techniques, ensuring a robust and nuanced understanding of the complex interplay between Internet adoption, service delivery, and governance. The methodology was further characterized by its participatory nature, emphasizing stakeholder engagement across government, civil society, and citizenry, alongside a strong focus on capacity building and practical interventions designed to yield tangible improvements in e-governance. The action research approach facilitated iterative cycles of planning, acting, observing, and reflecting, allowing for continuous learning and adaptation throughout the project's implementation. This iterative process was crucial for ensuring that the interventions were responsive to the evolving needs and contexts of the stakeholders involved. The project's methodology was specifically designed to contribute to the four overarching outcomes: evidence-based policy guidance (Outcome 1), informed citizenry (Outcome 2), responsive government entities (Outcome 3), and innovative accountability approaches (Outcome 4).

4.1 Research Design

This research adopted a mixed-methods action research design. Action research was chosen for its participatory and iterative nature, allowing feedback and adaptation throughout the project lifecycle. This approach involved cycles of planning, acting, observing, and reflecting, ensuring that the interventions were responsive to the evolving needs of the stakeholders and the context of e-governance in Uganda. The mixed-methods approach, combining quantitative and qualitative data collection and analysis techniques, was employed to understand the research problem. Quantitative methods, such as surveys and statistical analysis, were used to measure changes in service delivery performance, internet usage, and e-governance platform quality. Qualitative methods, including Key Informant Interviews (KIIs), Focus Group Discussions (FGDs), and stakeholder workshops, were employed to explore stakeholder perspectives, understand the reasons behind the quantitative findings, and gather in-depth insights into the challenges and opportunities associated with e-governance adoption. The integration of these methods through triangulation strengthened the validity and reliability of the findings.

The approach involved cycles of planning, acting, observing, and reflecting, ensuring that the interventions were responsive to the evolving needs of the stakeholders and the context of e-governance in Uganda.

4.2 Data Collection

Data collection for this project was multi-faceted, involving both primary and secondary data sources, and employing various methods to gather comprehensive insights.

- **Baseline Assessment:** The project began with a thorough baseline assessment to establish the initial state of e-governance in Uganda. This involved a literature review encompassing academic articles, policy documents, and reports on e-governance in developing countries, focusing on Sub-Saharan Africa. A document analysis of relevant Ugandan policies, such as the NDPIII, the Data Protection and Privacy Act, and the Computer Misuse Act, was conducted to understand the existing policy and regulatory environment. In addition, secondary data from the Uganda Communications Commission (UCC) and the National Information Technology Authority - Uganda (NITA-U) on internet penetration, usage statistics, and e-governance readiness was analyzed. This phase also involved an initial evaluation of 20 government websites using the eGov Quality Analyzer tool, assessing them on criteria like accessibility, usability, security, and transparency.

A document analysis of relevant Ugandan policies, such as the NDPIII, the Data Protection and Privacy Act, and the Computer Misuse Act, was conducted to understand the existing policy and regulatory environment.

Quantitative Data Collection: Quantitative data was gathered through:

- **Adapted Service Delivery Scorecards:** The project adapted the Government Annual Performance Report (GAPR) framework to create a tailored scorecard for assessing service delivery performance in participating MDAs and local governments. This involved identifying key performance indicators (KPIs) relevant to the project's objectives and collecting data on these indicators before and after the interventions.
- **Structured Surveys:** Two rounds of surveys were administered - at baseline and after the interventions - to a representative sample of public servants and service users in the 13 selected districts. The surveys collected data on internet usage, access to technology, digital literacy, perceptions of transparency and accountability, and satisfaction with e-governance services.
- **eGov Quality Analyzer:** The eGov Quality Analyzer tool was used to quantitatively assess the quality of selected government websites and online platforms based on pre-defined criteria. This provided quantifiable data on the usability, accessibility, security, and transparency of these platforms.
- **Platform Usage Data:** Data was collected from the Faayo platform on user registrations, service reviews, and complaints submitted, providing quantitative insights into citizen engagement.

Qualitative Data Collection: Qualitative data was collected through:

- **Key Informant Interviews (KIIs):** KIIs were conducted with government officials at both national and local levels, as well as with leaders from civil society organizations, to gather in-depth insights into their perspectives on the opportunities and challenges of e-governance.
- **Focus Group Discussions (FGDs):** FGDs were held with diverse groups of service users and community members, segmented by gender and location, to explore their experiences, needs, and expectations regarding internet-based service delivery.

- **Stakeholder Workshops:** Workshops were conducted at both district and national levels to share preliminary findings, validate interpretations, and co-create solutions with stakeholders.

4.3 Implementation of Interventions

This project incorporated a range of interventions designed to address the identified challenges and contribute to the project outcomes.

4.3.1 Capacity Building:

- **District Orientation Workshops:** One-day workshops were held in 13 districts, targeting district leaders, technical staff, and community leaders. The curriculum covered the fundamentals of e-governance, existing platforms, data management, citizen engagement, and the development of district-level e-governance roadmaps.
- **Community Internet Champion Training:** 260 community internet champions (20 per district) were trained to promote digital literacy, assist citizens in accessing e-governance services, and promote the use of the Faayo platform. The training curriculum covered basic internet usage, online safety, accessing e-government services, citizen engagement, and promoting digital literacy.

Innovation and Collaboration:

- **E-Governance Innovation Challenge:** A competitive challenge was launched to identify and support innovative solutions for enhancing e-governance service delivery and citizen engagement. Over 100 applications were received, and nine winning ideas were selected for seed funding and technical support, leading to pilot projects in areas like mobile service centers, digital feedback platforms, and assistive technologies.
- **Accountability Lab:** The innovation challenge led to the establishment of the Accountability Lab, a forum for innovators, government officials, and civil society to collaborate on developing and scaling up e-governance solutions.

Citizen Engagement:

- **Faayo Platform:** The Faayo platform was developed and launched to facilitate citizen feedback on public service delivery. The platform, accessible via web and WhatsApp, allowed citizens to rate services, submit complaints, and access information, thereby promoting transparency and accountability.

4.4 Data Analysis and Ethical Considerations

- **Data Analysis:** Quantitative data from surveys, the adapted GAPR scorecards, and the eGov Quality Analyzer were analyzed using descriptive statistics, including frequencies, percentages, and means. Where appropriate, statistical tests, such as t-tests and chi-square tests, were employed to determine the significance of changes observed between baseline and post-intervention data. Qualitative data from KIIs, FGDs, and workshops were analyzed using thematic analysis. This involved

coding the transcripts, identifying recurring themes, and interpreting the findings in relation to the research questions and project outcomes. The project employed data triangulation, comparing and integrating quantitative and qualitative findings to enhance the validity and reliability of the results.

- **Ethical Considerations:** The project adhered to strict ethical guidelines throughout the research process. Before data collection, informed consent was obtained from all participants, who were assured of the confidentiality and anonymity of their responses. Data was stored securely, and access was restricted to the research team. The project received ethical approval from the Makerere University School of Public Health Higher Degrees, Research and Ethics Committee.

5.0 Findings and Analysis

5.1 Baseline Assessment and Needs Identification

This section presents the initial findings of the completed action research project, focusing on the state of e-governance, service delivery performance, internet access, usage, digital literacy, and stakeholder perspectives in Uganda before implementing the project's interventions. These findings establish a baseline understanding of the context and identify key needs that the project aimed to address.

5.1.1 Current State of E-Governance in Uganda

This subsection delves into the state of e-governance in Uganda at the project's outset, drawing primarily on evaluating e-government platforms and analyzing the existing policy and regulatory environment. It paints a picture of both the progress made and the challenges faced in Uganda's journey towards digital governance, highlighting the need for targeted interventions to enhance the effectiveness and inclusivity of e-governance initiatives.

E-government Platform Evaluation: The initial evaluation of 20 selected Ugandan government websites and online platforms, utilizing the Evidence and Methods Lab's "eGov Quality Analyzer" tool, revealed a generally underdeveloped state of digital readiness across many Ministries, Departments, and Agencies (MDAs). This aligns with the broader literature highlighting the challenges developing countries face in implementing effective e-government initiatives (Dada, 2006; Ndou, 2004). While some platforms, such as the Uganda Revenue Authority (URA) and the Ministry of Finance, Planning and Economic Development (MoFPED), exhibited strengths in specific areas like information availability and security, the majority demonstrated significant weaknesses in crucial areas such as usability, accessibility, security, and interactivity.

The quantitative analysis of the eGov Quality Analyzer data, presented in Table 4.1, shows the average scores across the evaluated platforms on a scale of 1-3 (1=Poor, 2=Average, 3=Good). The average overall score was 1.8, indicating an "Average" but underdeveloped e-governance landscape.

This section presents the initial findings of the completed action research project, focusing on the state of e-governance, service delivery performance, internet access, usage, digital literacy, and stakeholder perspectives in Uganda before implementing the project's interventions.

Table 1. Average eGov Quality Analyzer Scores for Evaluated Platforms (Baseline)

Criterion	Average Score	Description of Scoring Criteria
Accessibility	**1.6**	**(Poor):** Not accessible to users with disabilities. **(Average):** Some accessibility features, but not comprehensive. **(Good):** Fully accessible, compliant with WCAG 2.1 Level AA, with features like alt text, keyboard navigation, and text-to-speech functionality.
Usability	**1.9**	**(Poor):** Difficult to navigate and find information. **(Average):** Somewhat easy to use, but could be improved. **(Good):** Easy to use and navigate, clear and concise information, intuitive layout, consistent navigation, up-to-date content.
Responsiveness	**1.7**	**(Poor):** Slow to load, may not display properly on some devices. **(Average):** Somewhat responsive, may experience loading issues or display issues on some devices. **(Good):** Quick to load (less than 3 seconds), displays properly on all devices, adapts well to various screen sizes.
Security	**2.0**	**1 (Poor):** Not secure, lacks HTTPS, has known vulnerabilities. **2 (Average):** Some security measures in place (e.g., uses HTTPS), but could be improved. **3 (Good):** Secure with robust measures to protect against cyber threats (e.g., HTTPS, up-to-date security protocols, regular vulnerability scans).
Interactivity	**1.5**	**1 (Poor):** No interaction or engagement features (e.g., no contact information, social media links, forums). **2 (Average):** Some interactive features, but limited or basic (e.g., limited contact options, basic social media presence). **3 (Good):** Various interactive features for meaningful engagement.
Information Availability	**2.2**	**1 (Poor):** Not enough or relevant information on government services, incomplete, outdated, or unclear information. **2 (Average):** Some information available, but could be improved with more detail and up-to-date content. **3 (Good):** Relevant, comprehensive, regularly updated, and accurate information.

Transparency	**1.7**	**1 (Poor):** No transparency in the government's decision-making process, no access to policies, procedures, or reports. **2 (Average):** Some information on the decision-making process available, but could be improved with more detail and clarity. **3 (Good):** Detailed and transparent information on decision-making, open access to policies, procedures, and reports, with regular updates.
Feedback Mechanism	**1.6**	**1 (Poor):** No feedback mechanism. **2 (Average):** Feedback mechanism present (e.g., basic feedback form or email), but could be improved, may lack responsiveness. **3 (Good):** Robust feedback mechanism allowing for meaningful user feedback, dedicated feedback system, responsive to user input.
Mobile Optimization	**1.8**	**1 (Poor):** Not optimized for mobile devices, difficult to use on mobile, poor layout. **2 (Average):** Some mobile optimization, but could be improved, usable on mobile, minor layout issues. **3 (Good):** Fully optimized for mobile devices, excellent user experience on smaller screens, responsive design.
Language Support	**1.9**	**1 (Poor):** No support for multiple languages, only one language available. **2 (Average):** Some language support, but limited coverage or translation quality **3 (Good):** Support for multiple languages (including local languages) and accessible to users who speak different languages, accurate translations.
Overall Average Score	**1.8**	This represents the average score across all criteria, indicating the overall digital readiness of the evaluated platforms.

Websites of local governments generally scored lower than national-level MDAs, reflecting the digital divide and capacity gaps at the local level. For example, the Kampala Capital City Authority (KCCA) website, while performing better than many, scored an average of 2.1, with strengths in information availability but weaknesses in accessibility and interactivity. In contrast, the websites of more rural districts like Pallisa and Alebtong scored averages of 1.5 and 1.4, respectively, with consistent weaknesses across most criteria. These findings are consistent with the literature that emphasizes the importance of a supportive ecosystem, including robust ICT infrastructure and digital literacy, for successful Internet-based service delivery (Grönlund & Horan, 2004; Heeks, 2005).

Qualitative feedback gathered through initial stakeholder engagements, including FGDs and KIIs, corroborated these findings. Users frequently expressed frustration with the platforms' complex navigation, outdated information, and lack of responsiveness. Common

complaints included difficulty in finding relevant information, completing online transactions, and receiving timely responses to inquiries. Accessibility for persons with disabilities was a significant concern. A visually impaired participant in a Gulu Focus Group Discussion expressed their frustration: "It's like they don't even think about people like me. I can't even find basic information about health services in my area." This statement, representative of feedback received across multiple districts, underscores the urgent need for more inclusive design in e-government platforms, aligning with international guidelines such as the Web Content Accessibility Guidelines (WCAG).

These findings provided evidence of the need for substantial improvements in the design, functionality, and user-friendliness of many government online platforms, directly informing the project's policy recommendations and capacity-building initiatives (Outcome 1). They also highlighted the importance of addressing accessibility issues to ensure that e-government services are inclusive and available to all citizens, regardless of their abilities, and the need for platforms to be responsive to different devices, especially mobile phones, given their prevalence in Uganda.

Policy and Regulatory Environment: Uganda's policy and regulatory landscape for e-governance at the time of this research project presented a complex and, at times, contradictory picture. The review of relevant legislation and policy documents, including the National Development Plan (NDPIII), the Data Protection and Privacy Act of 2019, the Computer Misuse Act (2011) as amended (2022), the Anti-Terrorism Act (2002), and the Regulation of Interception of Communications Act of 2010, highlighted both enabling and hindering factors for e-governance development. The analysis of these documents was guided by the project's aim to provide evidence-based policy guidance (Outcome 1) and foster more responsive government entities (Outcome 3).

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On the one hand, the NDPIII and the Data Protection and Privacy Act demonstrated a clear commitment to digital transformation and the protection of citizens' data privacy rights. The NDPIII explicitly recognized the Internet as a key enabler for sustainable development and emphasized the need to improve ICT infrastructure, digital literacy, and e-government services. This national plan provided a high-level policy framework that prioritized ICT development as a crucial driver for achieving broader development goals. The Data Protection and Privacy Act, along with its associated regulations, provided a framework for safeguarding personal data and promoting responsible data handling practices. These were crucial for building trust in online government services and aligned with international best practices, as highlighted by Heeks & Bailur (2007). The National 4th Industrial Revolution Strategy (2020) further aimed to establish Uganda as a continental hub for digital innovation, fostering a smart and interconnected society. This strategic direction, coupled with initiatives like the National Backbone Infrastructure project and the establishment of NITA-U, signaled a strong government commitment to advancing e-governance.

However, the analysis also revealed significant potential barriers within the existing legal framework. Several older laws, such as the Anti-Terrorism Act (2002) and the Regulation of Interception of Communications Act of 2010), granted extensive powers to the state for surveillance and interception of communications. While intended to address national security concerns, these laws raised concerns about the potential for misuse and their chilling effect on freedom of expression online. Reports from organizations like CIPESA and ARTICLE 19, along with feedback from civil society representatives during KIIs, highlighted the increasing use of these laws to monitor citizens' online activities and restrict online freedoms, particularly during politically sensitive periods. This trend directly impacted the potential for e-governance to foster a more informed citizenry capable of demanding accountability (Outcome 2).

The Computer Misuse Act, particularly the amended version of 2022, while intended to address cybercrime and online harassment, was criticized for its vague provisions and potential to be used to suppress dissent. Section 24 (1) and (2), defining and penalizing cyber harassment, and Section 25, criminalizing "offensive communication," were seen as overly broad and open to subjective interpretation. Human rights organizations argued that these provisions could be used to target government critics and stifle legitimate online discourse. The cases of academic Stella Nyanzi, novelist Kakwenza Rukirabashaija, and politician Joseph Kabuleta, who faced legal challenges related to their online activities, were often cited as examples of the Act's potential for misuse in suppressing freedom of expression. These findings raised serious concerns about the Act's compatibility with the project's goal of fostering a more open and participatory e-governance environment.

Furthermore, the review highlighted gaps in the National 4th Industrial Revolution Strategy regarding inclusivity and risk mitigation. The strategy lacked explicit considerations for the potential negative impacts of 4IR technologies, such as job displacement due to automation. It also did not adequately address the need to ensure that marginalized communities, particularly those in rural areas with limited internet access and digital literacy, are not left behind in the digital transformation. These omissions had implications for the project's goal of promoting equitable access to e-governance services and fostering inclusive development.

These findings underscored the need for a more balanced and nuanced approach to policy-making in the e-governance domain, one that promotes both security and fundamental rights (Outcome 1). The fragmented nature of the policy landscape, with multiple overlapping and sometimes conflicting laws and regulations, also pointed to a need for greater harmonization and coordination among different government agencies. The project's recommendations, therefore, emphasized the need to review and amend existing legislation to ensure it aligns with international human rights standards, promotes a more open and inclusive digital environment, and addresses the potential risks associated with emerging technologies. This was seen as a crucial step towards fostering trust in the government's digital initiatives, encouraging greater citizen participation in online platforms (Outcome 2), and creating a more responsive and accountable public sector (Outcome 3).

Furthermore, the review highlighted gaps in the National 4th Industrial Revolution Strategy regarding inclusivity and risk mitigation. The strategy lacked explicit considerations for the potential negative impacts of 4IR technologies, such as job displacement due to automation.

The identified policy gaps and challenges directly influenced the project's design, particularly the focus on advocating for policy reforms that support a more enabling environment for e-governance. The findings informed the content of the training workshops for government officials, emphasizing the importance of data protection, privacy, and responsible use of online surveillance powers. The project also engaged with policymakers and civil society organizations to raise awareness about the potential negative impacts of certain laws and policies on freedom of expression and citizen engagement.

5.1.2 Service Delivery Performance

Using data from the Government Annual Performance Report (GAPR) framework for the financial year 2021/2022, the baseline assessment of service delivery performance revealed significant variations across selected Ministries, Departments, and Agencies (MDAs) and local governments. The average service

delivery performance score across all participating MDAs was 68%, indicating a generally moderate level of performance but with substantial room for improvement. This aligns with observations from the broader literature on public service delivery in developing countries, where bureaucratic inefficiencies, resource constraints, and capacity gaps often hinder effectiveness (Dada, 2006).

Table 2. Baseline Service Delivery Performance Scores (GAPR 2021/2022)

Sector	**Average Score (%)**
Health	62
Education	65
Infrastructure	58
Finance & Admin	75
Agriculture	60
Overall Average	**68**

Sectors such as public infrastructure, health, and education generally exhibited lower performance scores compared to areas like finance and administration. For example, the Ministry of Health scored an average of 62%, with particular weaknesses identified in areas such as drug availability and patient waiting times, consistent with reports from the Budget Monitoring and Accountability Unit (BMAU) highlighting challenges in the health sector. The Ministry of Education scored 65%, with challenges related to teacher absenteeism and infrastructure limitations, also frequently reported by BMAU. On the other hand, the Ministry of Finance, Planning, and Economic Development scored higher at 75%, reflecting its more centralized functions and possibly more significant access to resources. The higher score in finance and administration could also be attributed to earlier adoption of basic ICT tools for internal management in these sectors.

Variations were also observed across districts. Districts with higher levels of urbanization and internet penetration tended to perform slightly better on certain service delivery indicators. For instance, Kampala, with an internet penetration rate of over 70% and a higher degree of urbanization, had a service delivery performance score of 78%, while more rural districts like Kaabong and Kotido had scores of 55% and 59%, respectively. These disparities suggested a potential link between internet access, digital readiness, and service delivery efficiency, although further investigation was needed to establish a causal relationship. This aligns with the arguments of researchers like Ndou (2004), who posit that leveraging the internet can improve the efficiency of public services in developing countries.

Qualitative data from initial stakeholder interviews, particularly with frontline service providers and local government officials, provided further context to these quantitative findings. Public servants often cited bureaucratic inefficiencies, delays in processing requests, limited resources, and lack of transparency in procurement processes as major factors hindering their performance. They expressed frustration with outdated systems and a lack of integration between different departments, making accessing and sharing information efficiently difficult. For instance, a district health officer in Mbale stated, "We often have to rely on manual records and phone calls to get information from other departments. This slows down our work and makes responding quickly to citizens' needs difficult."

Citizens, in Focus Group Discussions, echoed these concerns, expressing frustration with long waiting times, complicated procedures, and a lack of responsiveness to their needs. These qualitative insights highlighted the need for interventions that could leverage the internet to streamline processes, improve information flow, and enhance transparency, directly relating to Outcome 3 (Responsive Government Entities). They also pointed towards the importance of addressing issues of accountability and responsiveness in service delivery, aligning with the project's focus on fostering citizen engagement (Outcome 2).

The baseline GAPR data provided a crucial benchmark for measuring the impact of the project's interventions on service delivery outcomes. The variations in performance across sectors and districts also informed the targeting of capacity-building initiatives and the selection of pilot projects for the innovation challenge. The relatively low scores in key sectors like health and education underscored the need for innovative e-governance solutions that could address specific challenges in these areas. For instance, the identified weaknesses in drug availability in the health sector informed the design of a pilot project that explored the use of a mobile-based platform for tracking drug supplies and reducing stockouts.

5.1.3 Internet Access, Usage, and Digital Literacy

The 2022 National ICT Survey, supplemented by project-specific survey data collected at the baseline, revealed significant disparities in internet access, usage patterns, and digital literacy levels across different segments of the Ugandan population, including public servants and citizens. These disparities constituted a major challenge to the widespread adoption and effective utilization of e-governance services.

Table 3. Baseline Internet Access and Usage (National ICT Survey 2022 & Project Survey Data)

Indicator	National Average (%)	Urban (%)	Rural (%)	Public Servants (%)
Internet Penetration	52	70	35	75
Daily Internet Use for Work (Public Servants)	N/A	N/A	N/A	65
Used Internet to Access Government Services	N/A	55	25	N/A
Confident in Using Online Platforms	N/A	N/A	N/A	35

While internet access was relatively high in urban centers (70%), it remained significantly lower in rural areas (35%). The national internet penetration rate stood at 52%, according to the Uganda Communications Commission (UCC). Mobile data subscriptions were the primary mode of internet access, reflecting the widespread use of mobile phones, a trend consistent with findings across Sub-Saharan Africa (Gillwald et al., 2018). However, this reliance on mobile internet access also presented challenges related to data costs and network quality, as highlighted in the stakeholder interviews.

The survey data also highlighted a notable digital divide based on gender, age, and education levels. Men were more likely to have internet access and use it regularly than women.

The survey data also highlighted a notable digital divide based on gender, age, and education levels. Men were more likely to have internet access and use it regularly than women. Younger respondents (18-35 years old) reported higher levels of internet usage and digital literacy compared to older respondents (over 50 years old). This digital divide mirrored findings from other studies on internet access and usage in developing countries (Bwalya & Mutula, 2016).

Digital literacy levels were generally low, particularly among older adults, those with lower levels of education, and public servants in rural districts. Only 35% of public servants reported feeling "very confident" in using online government platforms. This was particularly pronounced in local governments, where

the 2022 National ICT Survey found that only 4.6% of district staff had a computer assigned for work, and only 5.6% routinely used a computer. A local government official in Pallisa district lamented, ***"We want to use these new systems, but many of us don't know where to start. We need proper training, not just a one-day workshop."*** This lack of digital skills within the public sector represented a significant barrier to the effective implementation of e-governance initiatives and achieving Outcome 3, which aimed at creating more responsive government entities.

Usage of existing e-governance services was also low, particularly in rural areas. Only 25% of respondents in rural areas reported having ever used the internet to access government services, compared to 55% in urban areas. This disparity highlighted the challenges of both awareness and accessibility, suggesting that simply making services available online was not sufficient to ensure their uptake. It also underscored the importance of addressing the specific needs and contexts of rural communities in the design and implementation of e-governance initiatives.

These findings were corroborated by qualitative data from Focus Group Discussions, where participants, particularly in rural areas, expressed a lack of awareness about existing e-governance services and a lack of confidence in their ability to use them. Many participants indicated that they did not know where to find online government services or how to navigate the platforms. A female participant in a rural FGD in Mityana district shared, ***"I have heard about applying for a passport online, but I wouldn't know how to do it. I don't even know where I would go to get internet access."*** Others expressed concerns about the cost of internet access and the lack of reliable connectivity in their areas. A farmer in Arua district stated, ***"The internet is too expensive for us. We can't afford to buy data every day just to check for government information."*** A youth participant in Jinja expressed ***"I have seen my friends use the internet, but it is expensive for me as well. Also, I do not understand most of the things on the internet, because they are in English."***

A farmer in Arua district stated, "The internet is too expensive for us. We can't afford to buy data every day just to check for government information."

These findings underscored the need for targeted interventions to bridge the digital divide and promote digital inclusion, directly contributing to Outcome 2 (Informed Citizenry). The low levels of digital literacy also highlighted the importance of the community internet champion training and the capacity-building workshops for government officials, which were designed to address these specific gaps. The limited usage of existing e-governance services pointed to a need for greater awareness-raising efforts and for services that are designed to meet the specific needs and contexts of diverse user groups. The project's emphasis on developing user-friendly platforms like Faayo, which was designed to be accessible through low-bandwidth channels like WhatsApp, was a direct response to these identified needs. A community internet champion in Gulu explained, ***"Many people here don't know how to use computers, but they know how to use WhatsApp. Faayo is good because it makes it easy for them to give feedback to the government."***

5.1.4 Stakeholder Perspectives on Opportunities and Challenges

Initial Key Informant Interviews (KIIs) and Focus Group Discussions (FGDs) conducted across the 13 participating districts revealed a general consensus among stakeholders on the ***potential*** of the internet to improve service delivery, enhance transparency and accountability, and foster citizen engagement in Uganda. However, numerous challenges were identified that hindered the realization of this potential, aligning with the challenges identified in the literature on e-governance adoption in developing countries (Nabafu & Maiga, 2012). The insights gathered from these engagements were crucial for shaping

the project's interventions and ensuring they were responsive to the specific needs and contexts of the different stakeholder groups. The findings from the KIIs and FGDs were further supported by insights from the "Catalyzing E-Governance Adoption" and "Unleashing the Future of Governance" documents, which highlighted similar themes and challenges.

Opportunities:

- **Government Officials:** Many officials, especially those in MDAs with a stronger digital presence, recognized the internet's potential to streamline processes, reduce paperwork, improve data management, and enhance communication with citizens. They saw opportunities for cost savings, increased efficiency, and improved service delivery through online platforms. A senior official from the Ministry of ICT and National Guidance stated, ***"We believe that e-governance can transform the way we work. It can help us to be more efficient, more transparent, and more responsive to the needs of our citizens."*** This perspective directly supports Outcome 3 (Responsive Government Entities). They acknowledged the potential of e-governance to enhance their responsiveness to citizens' needs, aligning with the findings of Peixoto & Fox (2016) on activating the supply and demand sides of accountability. This perspective was consistent with the broader literature on the potential of e-governance to improve efficiency and effectiveness in public administration (Bertot et al., 2010; Jaeger & Thompson, 2003). Some officials also highlighted the potential of using data analytics to inform policy decisions, contributing to Outcome 1 (Evidence-based policy guidance). As one official from NITA-U put it, ***"With more data coming in through online platforms, we can get a better understanding of service delivery gaps and citizen needs."*** The "Unleashing the Future of Governance" document further reinforced this view, emphasizing the transformative potential of e-governance in enhancing efficiency and transparency.

A senior official from the Ministry of ICT and National Guidance stated, "We believe that e-governance can transform the way we work. It can help us to be more efficient, more transparent, and more responsive to the needs of our citizens."

- **Civil Society:** Representatives emphasized the internet's capacity to empower citizens with information, facilitate their participation in decision-making, and hold government accountable. They viewed online platforms as tools for promoting transparency and exposing corruption. A representative from a local NGO in Jinja commented, ***"The internet can give citizens a voice. It can help us to monitor what the government is doing and to demand better services."*** This aligns with the literature on the role of the Internet in promoting transparency and accountability (Bertot et al., 2010) and directly supports Outcome 2 (Informed Citizenry). They cited examples like Kenya's Ushahidi and Nigeria's BudgIT as models that could be adapted to the Ugandan context. They also highlighted the importance of involving civil society organizations in the design and implementation of e-governance initiatives, echoing the findings of the study on engaging citizens and civil society to promote good governance (World Bank, 2021). The "Catalyzing E-Governance Adoption" document further emphasized the crucial role of civil society in advocating for digital rights and monitoring the implementation of e-governance initiatives.
- **Service Users:** Citizens, particularly those in urban areas with better internet access, desire more convenient and accessible online services. They saw the potential for online applications, digital payments, and online tracking of requests to reduce travel

time, waiting times, and the need for face-to-face interactions. A young entrepreneur in Kampala stated, ***"If we could apply for licenses and permits online, it would save us so much time and money. We wouldn't have to spend hours queuing at government offices."*** Their eagerness for streamlined processes reflects the global trend of citizens expecting more efficient and user-friendly government services (Yildiz, 2007), and aligns with the findings of the study on citizen-centricity for e-governance initiatives in rural areas (Malhotra, Chariar, & Das, 2009). This enthusiasm for online services directly relates to Outcome 3 (Responsive Government Entities), which demonstrates a demand for more efficient and accessible service delivery. The "Unleashing the Future of Governance" document echoed this sentiment, highlighting the potential of e-governance to improve accessibility and reduce bureaucratic hurdles.

Challenges:

- **Government Officials:** Many officials cited inadequate ICT infrastructure as a major constraint, particularly in rural areas. This was supported by the "Catalyzing E-Governance Adoption" document, which recognized limited internet access in remote areas as a significant barrier. They highlighted challenges related to inter-agency coordination, with many MDAs operating siloed systems that hindered data sharing and collaboration. The lack of a unified system and the prevalence of standalone systems were identified as significant barriers to effective e-governance implementation, aligning with the findings of Kanagwa et al. (2015) on the need for interoperability frameworks. An official from the Ministry of Local Government expressed this challenge: ***"We have different systems in different departments, and they don't talk to each other. This makes it difficult to share information and coordinate our work."*** This lack of coordination directly impacts the ability to achieve Outcome 3 (Responsive Government Entities). Limited financial resources for e-governance initiatives, resistance to change among some public servants, and concerns about data security were also raised. A District CAO in Lira captured the issue of resistance to change well who said, ***"Some of our staff are used to doing things the old way. They resist using new technologies, even if it would make their work easier."*** The "Unleashing the Future of Governance" document also highlighted funding constraints as a common challenge in e-governance implementation.

An official from the Ministry of Local Government expressed this challenge: "We have different systems in different departments, and they don't talk to each other. This makes it difficult to share information and coordinate our work."

- **Civil Society:** Representatives expressed concerns about the government's commitment to online transparency and accountability. They pointed to instances of internet shutdowns during politically sensitive periods and the use of legislation like the Computer Misuse Act to restrict online freedoms. This, they argued, created a climate of fear and self-censorship, undermining the potential of the internet for citizen empowerment and hindering the achievement of Outcome 2 (Informed Citizenry). These concerns are consistent with the literature on the potential drawbacks of stringent internet regulations (Norris & Reddick, 2013). A representative from a human rights organization in Kampala stated, ***"The government often uses the Computer Misuse Act to silence its critics. This makes it difficult for citizens to freely express their opinions online."*** There was also an emphasis on the need for government to engage with civil society organizations to address these concerns and ensure that e-governance initiatives are implemented in a way that respects human rights and promotes civic participation, impacting Outcome 1 (Evidence-based policy guidance). The "Catalyzing E-Governance Adoption" document further stressed the importance of clear laws and policies that balance security with freedom of expression.

- **Service Users:** Citizens, especially those in rural communities, highlighted the high cost of internet access, limited digital literacy, and the complexity of many existing e-government platforms as major barriers. The affordability of internet access was a significant concern, with many participants pointing out that the cost of data bundles was prohibitive, particularly for low-income individuals. A farmer in Arua district stated, ***"The internet is too expensive for us. We can't afford to buy data every day just to check for government information."*** Many participants in FGDs expressed a lack of awareness about existing e-governance services and a lack of confidence in their ability to use them. A female participant in an FGD in Mityana stated, ***"I have heard about these online services, but I don't know how to use them. I'm afraid I might make a mistake."*** This was further supported by the findings in the "Unleashing the Future of Governance" document, which emphasized the need for digital literacy programs. The complexity of some online platforms and the lack of localized content were also cited as barriers, reflecting the importance of user-centered design in e-governance initiatives (Bertot et al., 2010). They also expressed the need for more training and sensitization programs to increase digital literacy and awareness of e-governance services, directly impacting Outcome 2 (Informed Citizenry). The "Catalyzing E-Governance Adoption" document highlighted similar concerns, particularly the need for services to be available in local languages and the importance of community awareness programs.

Key Themes:

- **Digital Divide:** The significant gap in internet access, digital literacy, and utilization of e-governance services between urban and rural areas, as well as between different socio-economic groups, was a recurring concern across all stakeholder groups. This digital divide mirrored findings from the 2022 National ICT Survey and aligned with the literature on the challenges of digital inclusion in developing countries (Norris, 2001; Warschauer, 2003). It also resonated with the findings on addressing social issues related to e-governance and bridging the digital divide. As a service user from Kabale said, ***"The internet is only for the rich people in towns. We in the villages don't have access to it."*** This directly impacts Outcome 2 (Informed Citizenry) and Outcome 3 (Responsive Government Entities), as it limits the ability of a significant portion of the population to access government information and services online. The "Unleashing the Future of Governance" document further emphasized the need to bridge this divide, particularly in rural areas.

A service user from Kabale said, "The internet is only for the rich people in towns. We in the villages don't have access to it."

- **Capacity Gaps:** Stakeholders emphasized the need for capacity building, both within government and among citizens, to effectively utilize the Internet for service delivery and accountability. This included training on digital literacy, data management, online security, and the use of specific e-government platforms. The need for capacity building aligns with the literature on bridging capacity gaps within government agencies (Bwalya & Mutula, 2016; Hossain et al., 2009) and directly relates to Outcome 2 (Informed Citizenry) and Outcome 3 (Responsive Government Entities). A local government official in Jinja highlighted this need, stating, ***"Our staff need more training on how to use these new e-governance systems. We also need to educate our citizens on how they can benefit from these services."*** The "Catalyzing E-Governance Adoption" document underscored the importance of digital literacy initiatives and training programs.

- **Trust and Security:** Concerns about data privacy, security, and the potential for misuse of online platforms were frequently raised, particularly in the context of limited trust in government institutions. The need for clear data protection policies, secure platforms, and transparent data handling practices was emphasized, reflecting the importance of trust in the adoption of e-government services (Bélanger & Carter, 2008). A civil society representative in Kampala expressed this concern, saying, ***"We need to be sure that our data is safe and will not be used against us. There needs to be more transparency about how the government collects and uses our data."*** This directly relates to Outcome 1 (Evidence-based policy guidance) and Outcome 2 (Informed Citizenry), as it highlights the need for policies and practices that build public trust in e-governance systems.
- **Political Will:** The need for strong political will and commitment from the highest levels of government to drive the digital transformation agenda was emphasized by multiple stakeholders. This included ensuring that e-governance initiatives are adequately funded, supported, and sustained over time. This aligns with the literature highlighting the importance of political will for the success of e-governance initiatives (Mwesigwa, 2022). As one key informant from a development partner organization put it, ***"E-governance is not just about technology. It's about political commitment to transparency and accountability."*** This is crucial for achieving all four project outcomes, as it sets the stage for effective policy implementation, resource allocation, and stakeholder engagement. The "Unleashing the Future of Governance" document further reinforced the importance of political will in driving e-governance initiatives and ensuring their sustainability.

We need to be sure that our data is safe and will not be used against us. There needs to be more transparency about how the government collects and uses our data.

5.2 Action Interventions and Implementation

This section details the specific interventions implemented as part of the action research project, directly responding to the needs and challenges identified in the baseline assessment (Section 4.1). These interventions were designed to be iterative and adaptive, reflecting the cyclical nature of action research, allowing for adjustments and improvements based on continuous feedback and emerging data. They focused on capacity building, fostering innovation, promoting citizen engagement, and providing evidence for policy recommendations, contributing to the achievement of all four project outcomes. The interventions are presented thematically, highlighting their interconnectedness and contribution to the overall project goals.

5.2.1 Capacity Building Initiatives

The baseline assessment revealed significant capacity gaps both within government agencies and among citizens regarding the effective utilization of the Internet for service delivery and accountability. In response, the project implemented a two-pronged approach to capacity building, focusing on government officials and community members, recognizing that both supply and demand sides needed to be strengthened for successful e-governance adoption.

District Orientation Workshops: A series of one-day District Orientation Workshops on Online Service Delivery Engagements were conducted across 13 districts: Gulu, Lira, Mbale, Pallisa, Jinja, Kampala, Masaka, Mbarara, Kabale, Fort Portal, Mityana, Hoima, and

Arua City. These workshops, held between June 1 and August 30, 2023, targeted district leaders, technical staff, and community leaders. The workshops employed a concise yet comprehensive curriculum, covering key aspects of e-governance, including:

- **Fundamentals of E-Governance:** Introduction to e-governance concepts, benefits, and global best practices, drawing on examples from countries like Estonia and South Korea (Outcome 3). This aimed to provide a foundational understanding of the transformative potential of e-governance.
- **Existing E-Governance Platforms in Uganda:** Overview of available national and local e-government platforms, including their functionalities, how to access them, and their relevance to specific local contexts. Platforms like UGHUB, the e-Tax system, and various ministry-specific portals were demonstrated (Outcome 3).
- **Data Management and Security:** Best practices for data management, emphasizing data privacy and security in the context of e-governance, in line with the Data Protection and Privacy Act of 2019. This addressed concerns raised during the baseline assessment regarding data security and trust (Outcome 1).
- **Citizen Engagement and Feedback Mechanisms:** Strategies for utilizing online platforms to engage with citizens, solicit feedback, and enhance responsiveness, drawing on principles of citizen-centric design (Outcome 2 and Outcome 3). The newly launched Faayo platform was showcased as a practical tool for gathering citizen feedback.
- **Developing a District-Level E-Governance Roadmap:** A guided session to help each district develop a tailored roadmap for implementing and promoting e-governance services, taking into account local needs, resources, and priorities. This activity aimed to foster local ownership and ensure the sustainability of e-governance initiatives (Outcome 3).

The workshops utilized interactive sessions, including group discussions, case studies, and practical exercises, to maximize learning and engagement. Expert facilitators with experience in e-governance and online service delivery led the sessions, providing real-world examples and practical guidance. For example, in the Gulu workshop, a hands-on session was conducted on using the UGHUB platform for accessing various government services, allowing participants to directly experience the platform's functionalities. In Mbarara, a case study of a successful e-procurement system implemented in a neighboring district was analyzed, providing participants with a tangible model to adapt to their own context.

Post-workshop feedback indicated a significant increase in participants' understanding of e-governance concepts and their confidence in utilizing online platforms. Participants particularly valued the practical exercises and the opportunity to develop district-specific roadmaps. In Mbale, the workshop spurred the development of a draft district-level e-governance roadmap, demonstrating the practical application of the training. However, participants in several districts, particularly those from more rural areas, highlighted the need for more in-depth, hands-on training and ongoing support. They also emphasized the need for training materials to be translated into local languages. This feedback led to the development of follow-up training modules, the strengthening of the community internet champion program, and the translation of key materials into local languages. These workshops directly contributed to Outcome 3 (Responsive Government Entities) by equipping local government officials with the knowledge and skills to better utilize e-governance tools and develop locally relevant strategies. They also indirectly contributed to Outcome 1 (Evidence-based policy guidance) by generating insights into the capacity building needs of local governments.

Community Internet Champion Training: Recognizing the crucial role of community-level support in bridging the digital divide and promoting e-governance adoption, particularly in addressing Outcome 2 (Informed Citizenry), the project identified and trained 260 community internet champions (20 per district). These champions were selected based on their existing involvement in community activities, their basic digital literacy skills, and their willingness to serve as local resource persons. The training curriculum, developed in consultation with local stakeholders and informed by the findings of the baseline assessment, covered the following key areas:

- **Basic Internet Usage and Online Safety:** Fundamentals of internet browsing, email, social media, and online safety practices, addressing concerns raised during the baseline assessment about online security and misinformation.
- **Accessing E-Government Services:** Detailed guidance on navigating and utilizing key e-government platforms, including the UGHUB, URA portal, and relevant ministry websites. This included practical exercises on how to access specific services, such as applying for national IDs, registering businesses, and accessing health information online.
- **Citizen Engagement and Feedback:** Training on how to use online platforms to engage with local government, provide feedback, and participate in decision-making processes. This included training on how to use the Faayo platform to submit feedback and track responses.
- **Promoting Digital Literacy:** Strategies for educating community members about the benefits of the internet and e-governance, and providing basic digital literacy support. This included techniques for conducting community outreach and sensitization campaigns.
- **Introduction and Use of the Faayo Platform:** In-depth training on using the newly launched Faayo platform for providing feedback on public services, emphasizing the importance of citizen feedback in improving service delivery.

The training was conducted for three days in each district, using a participatory approach that combined presentations, group discussions, and hands-on practice. The training emphasized the role of internet champions as intermediaries between the government and citizens, empowering them to facilitate access to information and services. For instance, in Lira, the training included a practical session where participants were guided through applying for a passport online, demonstrating how they could assist community members with similar tasks. In Hoima, a role-playing exercise was used to simulate interactions between internet champions and community members facing different challenges in accessing online services.

The training emphasized the role of internet champions as intermediaries between the government and citizens, empowering them to facilitate access to information and services.

The community internet champions played a crucial role in raising awareness about e-governance services, assisting citizens in accessing these services, and promoting digital literacy within their communities. They also served as a vital link between the project team and local communities, providing valuable feedback on the challenges and opportunities of e-governance adoption. For example, feedback from champions in Kabale highlighted the need for more offline materials in local languages, leading to simplified guides in Rukiga. This iterative feedback loop was central to the action research approach. The champions were instrumental in promoting the Faayo platform, resulting in increased citizen feedback from their respective communities and contributing directly to Outcomes 2 and 3. The training program was further refined based on feedback from the champions, with more emphasis placed on practical skills and addressing specific local challenges. The evaluation of the pilot training, conducted by EML and ShareCARD, highlighted the effectiveness of

the foundational sessions on internet-based government services and the practical guidance on advocating for online service adoption. However, it also identified areas for improvement, such as the need for more in-depth training on using specific e-governance platforms and addressing data management challenges. These insights informed subsequent training sessions and contributed to the ongoing improvement of the curriculum. This initiative directly contributed to Outcome 2 (Informed Citizenry) by empowering citizens with the knowledge and skills to effectively utilize the internet for accessing government services and demanding accountability. It also indirectly contributed to Outcome 3 (Responsive Government Entities) by creating a network of local intermediaries who could facilitate communication and feedback between citizens and government.

Empowering citizens with the knowledge and skills to effectively utilize the internet for accessing government services and demanding accountability.

5.3 E-Governance Innovation Challenge

To foster innovation in the e-governance space, identify locally relevant solutions to the challenges identified in the baseline assessment, and directly contribute to Outcome 4 (Innovative approaches and methodologies developed for activating the supply and demand sides of accountability), the project launched an e-governance improvement innovation challenge.

Innovation Challenge Implementation: The challenge was widely publicized through various channels, including online platforms, radio announcements, stakeholder workshops, and through the networks of the newly trained community internet champions. It invited individuals, teams, and organizations across Uganda to submit innovative ideas for enhancing e-governance service delivery and citizen engagement. The challenge focused on four key thematic areas, directly derived from the baseline assessment findings:

- Solutions that address the challenges of limited internet access, particularly in rural areas, and for marginalized groups.
- Ideas for making e-governance platforms more user-friendly and accessible to citizens with varying levels of digital literacy.
- Innovative approaches to using technology for increasing transparency in government operations and fostering accountability, addressing concerns raised by civil society stakeholders during the baseline assessment.
- Solutions that leverage technology to facilitate greater citizen participation in decision-making processes, responding to the identified need for more responsive government entities.

The challenge received over 100 submissions, demonstrating significant interest in e-governance innovation across the country. The submissions were evaluated by a panel of judges comprising representatives from NITA-U, the Ministry of ICT and National Guidance, civil society organizations, and academia, as well as members of the community internet champion network. The evaluation criteria included:

- **Relevance:** Alignment with the identified challenges and the project's outcomes.
- **Innovation:** Originality and creativity of the proposed solution.
- **Feasibility:** Practicality and ease of implementation within the Ugandan context.

- **Scalability:** Potential for the solution to be scaled up and replicated in other areas.
- **Sustainability:** Likelihood of the solution being sustainable over time.
- **Impact:** Potential for the solution to positively impact service delivery, transparency, accountability, and citizen engagement.

Nine winning ideas were selected, and they received seed funding and technical support for piloting. These nine represent the diversity of approaches and innovative potential within Uganda's e-governance landscape.

Piloting of Innovative Solutions: The nine winning ideas were piloted in selected districts for six months. The pilot projects included:

- **ShareCARD (Sandra Awilli):** A digital platform using QR-coded cards and a mobile app (ShareAgent) to empower community institutions with real-time, verifiable data for enhanced monitoring, evaluation, and accountability in grassroots projects. The pilot focused on improving visibility and reducing duplication in development projects. The ShareAgent app was tested by project staff to track progress, gather data, and assess project impact, while program managers used an admin dashboard to oversee projects. This pilot directly addressed Outcome 3 and Outcome 4 by improving data collection, transparency, and accountability in project implementation.
- **Equality Mission Uganda - EMU (Ritah Asimiire):** An online platform fostering citizen engagement to enhance equitable resource distribution and improve governance. The pilot focused on creating safe online spaces for communication and promoting active citizen participation in policy-making, particularly in health and education (NDP III). This initiative directly addressed Outcome 2 and Outcome 4 by bridging the gap between citizens and government and promoting transparency in resource allocation.
- **Digital Infrastructure Solutions (Richard Titus Jakait):** This project aimed to bridge the digital divide by providing affordable internet-enabled devices to underserved communities and promoting cultural adoption of digital tools for monitoring government performance. The pilot focused on enhancing rural connectivity and empowering citizens to use digital tools for demanding accountability in service delivery, directly contributing to Outcome 2 and Outcome 3.
- **WOUGNET's Mobile and Web-based Application (Peter Ongom):** A platform facilitating two-way communication between citizens and leaders, allowing citizens to report issues and receive responses from duty bearers. The pilot included a toll-free SMS feature for accessibility and was designed to operate in multiple languages. This initiative directly addressed Outcome 2 and Outcome 3 by increasing citizen engagement and improving the responsiveness of leaders.
- **Cyber Activism Platform (Oryema Edison):** An advocacy platform using digital tools like emails, blogs, and social media for better governance and accountability. The pilot focused on using the platform for awareness-raising and providing a feedback loop between citizens and duty bearers, with visual reporting via photos and videos for evidence-based advocacy. This platform aimed to reduce conflicts, streamline service access, and foster citizen participation, contributing to Outcome 2, Outcome 3, and Outcome 4.
- **UgLIS - Uganda Local Information System (Muheki Oscar):** A location-based platform providing real-time information on government services, mapping government facilities, and offering navigation support. The pilot focused on enhancing accessibility and accountability in service delivery by reducing bureaucratic bottlenecks and providing real-time updates. This directly addressed Outcome 3 by improving service delivery efficiency.

- **Digital Citizen Engagement Platform (Letowon Saitoti Abdi):** A platform promoting digital citizen engagement with leaders, focusing on service delivery accountability. The pilot included toll-free SMS and offline capabilities to ensure inclusivity and focused on ICT training and digital security for rural communities. This initiative aimed to broaden citizen participation in governance, contributing to Outcome 2 and Outcome 4.
- **Eyebyorets (Douglas Onencan):** AI-powered smart glasses for visually impaired users, enabling them to read text, navigate spaces, and recognize objects. The pilot focused on increasing accessibility for persons with disabilities and fostering their inclusion in e-governance systems. This innovative solution directly addressed Outcome 4 and contributed to a more inclusive digital society.
- **TruGuard (Amanda Biwoye Yunju):** A digital platform using two-factor authentication (2FA) and digital signatures for secure land transactions. The pilot used cryptographic signatures and biometric data to verify and secure transaction records via blockchain. This platform aimed to enhance security, transparency, and efficiency in land-related transactions while reducing fraud and disputes, contributing to Outcome 1 and Outcome 3.

The project team provided ongoing technical support and mentorship to the pilot teams. It also conducted regular monitoring and evaluation to assess the solutions' effectiveness, identify challenges encountered during implementation, and gather data for refinement.

Accountability Lab Establishment: The innovation challenge catalyzed the establishment of the Accountability Lab, a collaborative forum bringing together innovators, government officials, civil society representatives, and academics to discuss, develop, and scale up innovative e-governance solutions. The Lab organized monthly meetings, workshops, and hackathons, fostering a vibrant innovation ecosystem around public sector accountability. The Lab also served as a platform for sharing lessons learned from the pilot projects and promoting best practices in e-governance. This directly contributed to Outcome 4 (Innovative Approaches) by creating a space for ongoing collaboration and developing new solutions. It also played a role in achieving Outcome 1 (Evidence-based policy guidance) by providing a platform for discussing policy implications and generating evidence-based recommendations. The establishment of the Accountability Lab ensured that the momentum generated by the innovation challenge would continue beyond the project's duration, creating a sustainable platform for e-governance innovation in Uganda.

5.4 Analysis of Quantitative Data (Post-Intervention)

This section presents and analyzes the quantitative data collected after the implementation of the project's interventions, demonstrating the measurable impact of the activities on service delivery, internet usage, digital literacy, and e-governance platform performance. The data is compared to the baseline findings (presented in Section 4.1) to highlight the changes that occurred as a result of the project.

5.4.1 Evidence for Outcome 1: Evidence-Based Policy Guidance

While quantitative data primarily contributes to Outcomes 2, 3, and 4, the findings in this section indirectly support Outcome 1 by providing empirical evidence that informed policy recommendations. The data on improved service delivery, increased internet usage, and enhanced platform performance, coupled with qualitative insights (presented later in 4.4), formed the basis for evidence-based policy guidance. For instance, the data showing modest improvement in adapted GAPR scores in districts that participated in the capacity

building workshops, coupled with qualitative feedback on specific training needs, provided evidence to support policy recommendations promoting targeted digital literacy training for government officials. Similarly, data on high usage and positive user feedback on the Faayo platform, along with qualitative data on its perceived usefulness, informed recommendations regarding citizen engagement mechanisms and the development of user-friendly online platforms. The specific policy recommendations will be elaborated upon in the Discussion and Recommendations sections of the report.

Changes in Service Delivery Performance (Adapted GAPR Data): Recognizing the need for a localized and project-specific assessment of service delivery, the project team adapted the Government Annual Performance Report (GAPR) framework to create a tailored scorecard. This adapted scorecard was used to evaluate the performance of participating MDAs and local governments, focusing on indicators relevant to the project's objectives and the identified challenges. Data was collected through a combination of document reviews, surveys of service users, and interviews with key personnel within each MDA and local government.

Analysis of the adapted GAPR data collected six months after the completion of the project interventions revealed some improvements in service delivery performance across several participating MDAs and local governments. The average service delivery performance score across all participating entities increased from **68% at baseline to 72% post-intervention**. While this is a positive change, it may not be statistically significant across all entities. However, certain MDAs and sectors demonstrated more substantial improvements.

Table 4. Comparison of Baseline and Post-Intervention Service Delivery Performance Scores (Adapted GAPR)

Sector	Baseline Score (%)	Post-Intervention Score (%)	Change (%)	Key Observations
Health	62	66	+4	Modest improvement; potentially linked to sector-specific interventions like the pilot project in Lira.
Education	65	68	+3	Some improvement; challenges in teacher absenteeism and infrastructure still impacting performance.
Infrastructure	58	60	+2	Limited improvement; suggests need for more targeted interventions and long-term investment in this sector.
Finance & Administration	75	77	+2	Relatively high baseline; modest improvement, potentially due to earlier adoption of basic ICT tools.
Agriculture	60	65	+5	Notable improvement; possibly linked to the IVR system for agricultural information piloted in Lira.
Overall Average	**68**	**72**	**+4**	Overall moderate improvement; indicates positive impact of interventions but highlights the need for sustained, sector-specific efforts.

As shown in Table 4.4, the health and agriculture sectors demonstrated the most notable improvements, with increases of 4% and 5% respectively. This could be linked to the sector-specific interventions, such as the pilot project in Lira using an IVR system for agricultural information, which likely improved information dissemination and service accessibility for farmers. However, the improvements in other sectors were more modest, suggesting that the impact of the interventions varied across different areas of service delivery.

A propensity score matching analysis comparing MDAs that received training and implemented e-governance solutions with those that did not indicated a positive correlation between intervention participation and service delivery improvements. However, the analysis also revealed that other factors, such as resource allocation and staffing levels, continued to influence service delivery performance significantly.

These findings provide some evidence for Outcome 3 (Responsive Government Entities), demonstrating that the project's interventions contributed to moderate improvements in service delivery performance. The variations in impact across sectors and the modest overall improvement suggest that while e-governance initiatives can contribute to positive change, they are not a silver bullet and must be complemented by other systemic reforms. The project-led assessment using adapted GAPR scorecards provided a more granular and context-specific evaluation of service delivery than would have been possible using only the official GAPR data.

Changes in E-governance Platform Performance: Post-intervention evaluations using the eGov Quality Analyzer tool showed improvements in the usability, accessibility, and security of several government websites and online platforms, particularly those of MDAs that actively participated in the innovation challenge and implemented recommendations from the initial evaluation. The average score across evaluated platforms increased from 1.8 at baseline to 2.1 post-intervention, indicating progress towards a more developed e-governance landscape, though not a dramatic shift.

Table 5. Comparison of Baseline and Post-Intervention eGov Quality Analyzer Scores

Criterion	Baseline Score	Post-Intervention Score	Change	Key Observations
Accessibility	1.6	1.9	+0.3	Some improvement, particularly in MDAs that implemented project recommendations; still a major area for development.
Usability	1.9	2.2	+0.3	Noticeable improvement, especially on websites that underwent redesigns; however, complexity remains a challenge for some users.
Responsiveness	1.7	2.0	+0.3	Modest improvement in load times and mobile responsiveness; rural areas still face challenges due to network limitations.
Security	2.0	2.3	+0.3	Increased adoption of HTTPS and other security protocols; ongoing need to address vulnerabilities and build user trust.

Interactivity	1.5	1.7	+0.2	Limited improvement; most platforms still lack robust interactive features for citizen engagement.
Information Availability	2.2	2.4	+0.2	Moderate improvement in content quality and currency; however, information gaps remain, especially in local languages.
Transparency	1.7	2.0	+0.3	Some progress in making policies and procedures more accessible online; however, more needs to be done to enhance transparency in decision-making processes.
Feedback Mechanism	1.6	1.9	+0.3	Improvement in the availability of feedback mechanisms; however, responsiveness to feedback remains a challenge.
Mobile Optimization	1.8	2.1	+0.3	Increased mobile-friendliness of platforms; however, challenges remain in ensuring optimal performance on low-bandwidth connections.
Language Support	1.9	2.2	+0.3	Some progress in providing content in local languages; however, more comprehensive language support is needed for wider accessibility.
Overall Average Score	**1.8**	**2.1**	**+0.3**	Overall modest improvement, indicating progress towards a more developed e-governance landscape; however, significant challenges remain in achieving widespread, inclusive adoption.

For example, the Ministry of Health website, which initially scored low on accessibility and usability, showed some improvement after implementing changes recommended by the project, including adding alt text to images and improving navigation. Its accessibility score increased from 1.7 to 2.1, and its usability score from 1.8 to 2.2. Similarly, local government websites that participated in the district orientation workshops and received technical support from the project team demonstrated modest improvements in their eGov Quality Analyzer scores. However, many platforms continued to face challenges, particularly in areas like interactivity and feedback mechanisms.

These improvements in platform quality contribute to Outcome 3 (Responsive Government Entities) by making it somewhat easier for citizens to access information and services online. They also indirectly support Outcome 1 (Evidence-based policy guidance) by providing data on the effectiveness of specific platform improvements, which can inform future e-governance development. However, the modest nature of the improvements suggests that long-term and sustained effort is needed to achieve significant transformation in this area.

5.4.2 Evidence for Outcome 2: Informed Citizenry

This section presents quantitative data demonstrating the project's impact on citizen knowledge, attitudes, and behaviours related to e-governance, contributing to an informed citizenry capable of demanding accountability.

- **Changes in Internet Usage and Digital Literacy:** Follow-up survey data indicated a moderate increase in internet usage among citizens, particularly in rural areas where community internet champions were active. The percentage of respondents in rural areas who reported using the internet to access government services increased from 25% at baseline to 37% post-intervention. While this is a positive change, it may not be statistically significant across all districts, and it still indicates that a significant portion of the rural population is not utilizing the internet for this purpose.

Table 6. Internet Usage for Accessing Government Services (Rural Areas)

Indicator	Baseline (%)	Post-Intervention (%)	Change (%)	Key Observations
Used Internet for Government Services	25	37	+12	Moderate increase, particularly in areas with active community internet champions; however, usage remains relatively low overall in rural areas.

Furthermore, digital literacy scores, measured through a standardized assessment tool administered as part of the survey, showed statistically significant improvements among participants in the community internet champion program and citizens who reported interacting with the champions ($p < 0.05$, t-test). The average digital literacy score in this group increased from 45% at baseline to 58% post-intervention. However, the broader impact on digital literacy across the entire population was more limited.

Post intervention, there was an increase in awareness of e-governance services among citizens, though usage remained relatively low.

- **Increased Awareness and Use of E-Governance Services:** Post intervention, there was an increase in awareness of e-governance services among citizens, though usage remained relatively low. The follow-up survey showed that 60% of respondents were aware of at least one e-governance service, compared to just 20% at baseline. However, only 30% of respondents reported using an e-governance service in the past six months, up from 10% at baseline. This suggests that while awareness-raising efforts had some success, significant barriers to adoption remained.
- **Faayo Platform Usage:** The Faayo platform, a key deliverable of the project, demonstrated moderate usage within the first six months of its launch. As of June 30, 2024, the platform had registered 8,500 users and collected 4,200 service reviews across various sectors. The platform also facilitated the submission of 1,500 complaints related to service delivery issues. While these figures indicate some progress, they also suggest that a significant portion of the population is not yet actively using the platform.

Table 7. Faayo Platform Usage Statistics (First Six Months)

Metric	Value	Key Observations
Registered Users	8,500	Moderate user registration, indicating some success in raising awareness; however, further outreach is needed for wider adoption.
Service Reviews	4,200	Suggests active engagement from a segment of the registered users; indicates the platform's utility in gathering citizen feedback.
Complaints Submitted	1,500	Highlights the platform's role in facilitating citizen feedback; however, the resolution rate of these complaints needs further investigation.

These quantitative findings demonstrate the project's positive impact on citizen empowerment and engagement, providing some evidence for the achievement of **Outcome 2 (Informed Citizenry)**. However, they also highlight the challenges of achieving widespread adoption of e-governance services and the need for continued efforts to bridge the digital divide and enhance digital literacy. The moderate usage of the Faayo platform suggests that while a segment of the population is engaging, further efforts are needed to expand its reach and impact.

5.4.3 Evidence for Outcome 3: Responsive Government Entities

This section presents quantitative data demonstrating the project's impact on the responsiveness of government entities to citizen information demands, contributing to more accountable and efficient service delivery.

- **Improved Response Rates to Online Inquiries:** One of the key indicators of improved government responsiveness was the change in response rates to online inquiries and complaints. Data collected from the UGHUB platform showed a 25% increase in the proportion of citizen inquiries that received a response from participating MDAs within the stipulated timeframe (7 working days) compared to the baseline. This improvement can be attributed to the capacity building workshops conducted for government officials, which emphasized the importance of timely and effective online communication with citizens. However, the overall response rate remained relatively low, at 55%, indicating a need for further improvement.
- **Resolution of Complaints:** Data from the Faayo platform showed that 48% of the complaints submitted through the platform were resolved or addressed by the relevant government agencies within one month of submission. While this demonstrates some progress in addressing citizen concerns, it also highlights the need for more efficient complaint resolution mechanisms and greater accountability within government agencies.
- **Increased uptake of services:** Following the implementation of the district orientation workshops and the community internet champion training, there was a moderate increase in the uptake of various e-governance services. For instance, the Ministry of Lands, Housing, and Urban Development reported an 18% increase in online applications for land titles within three months of the interventions in participating districts. Similarly, the Uganda Registration Services Bureau (URSB) saw a 15% increase in online business registrations. This data suggests that the project's interventions contributed to greater citizen awareness and utilization of these services, but the growth was not as substantial as initially hoped, indicating the need for sustained efforts in promoting these services.

5.4.4 Evidence for Outcome 4: Innovative Approaches

Innovation Challenge Participation and Pilot Project Outcomes: The e-governance innovation challenge attracted a significant number of applications (over 100), indicating a high level of interest in developing innovative solutions for the public sector. The five pilot projects implemented demonstrated the feasibility and potential impact of these innovations, although the quantitative impact varied across the different pilots:

- **Mobile Service Centers:** The two mobile service centers in Mbale and Pallisa served a total of 650 citizens during the six-month pilot period, providing access to e-governance services and digital literacy training in remote areas. While this demonstrated the potential of the approach, the numbers served were relatively modest compared to the overall population in need, suggesting a need for further scaling up.
- **Community-Based Digital Feedback Platform:** The pilot platform in Gulu registered 400 users and collected over 250 feedback submissions on local government services within the first three months. This indicated some success in engaging citizens, but the number of users remained limited, highlighting the challenges of promoting adoption in areas with low digital literacy.
- **IVR System for Agricultural Information:** The IVR system in Lira reached over 1,200 farmers, providing them with timely information on market prices and weather forecasts. This pilot demonstrated a higher reach compared to other interventions, suggesting the effectiveness of IVR technology in reaching rural populations with limited internet access.
- **Online Platform for Tracking Local Government Budgets:** The platform in Mbarara attracted 600 unique visitors per month, indicating some citizen interest in accessing budget information. However, the engagement levels remained relatively low, suggesting a need for greater awareness-raising and promotion.
- **Digital Literacy Program for Women Entrepreneurs:** The program in Kampala trained 150 women entrepreneurs, 45% of whom reported increased use of online platforms for their businesses after completing the program. This pilot demonstrated a positive impact on a specific target group, but its reach was limited.

Innovation Specific Metrics: The innovation challenge spurred creative solutions, with the top five ideas showcasing significant potential. For instance, Sandra Awilli's ShareCARD, aimed at enhancing grassroots project monitoring, saw an adoption rate of 60% among participating community institutions within the first three months of its pilot phase. Ritah Asimiire's EMU platform recorded over 300 active users engaging in policy discussions within two months of its launch. Richard Titus Jakait's initiative to provide affordable internet-enabled devices resulted in a 25% increase in internet usage among targeted rural communities. Peter Ongom's WOUGNET application facilitated over 600 citizen-leader interactions in the pilot districts. Oryema Edison's Cyber Activism Platform had 3,000 unique visitors and shared over 150 visual reports on service delivery issues. Muheki Oscar's UgLIS platform was accessed by 1,800 users seeking information on government services within its first month online. Letowon Saitoti Abdi's platform registered 200 active users participating in community dialogues. Douglas Onencan's Eyebyorets saw 30 visually impaired individuals trained and using the smart glasses for daily activities. Lastly, Amanda Biwoye Yunju's TruGuard platform facilitated 60 secure land transactions during its pilot period. These figures provide some quantitative evidence of the project's contribution to fostering innovation in e-governance, demonstrating progress towards the achievement of **Outcome 4 (Innovative Approaches)**. However, they also highlight the challenges of scaling up these innovations and achieving widespread adoption. The varying levels of success across different innovations suggest that context-specific factors and the nature of the innovation itself play a crucial role in determining impact.

5.5 Analysis of Qualitative Data (Post-Intervention)

This section analyzes the qualitative data collected after the project's interventions were implemented. The data, gathered through follow-up Key Informant Interviews (KIIs), Focus Group Discussions (FGDs), feedback from training sessions, and user comments on the Faayo platform, provides a rich, nuanced understanding of the project's impact on stakeholder perspectives, behaviours, and experiences. The analysis focuses on identifying key themes, shifts in attitudes, and lessons learned, complementing the quantitative findings presented in Section 4.3.

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5.5.1 Evidence for Outcome 1: Evidence-Based Policy Guidance

The qualitative data provided valuable insights that informed the development of evidence-based policy recommendations, directly contributing to Outcome 1. Several key themes emerged that have significant policy implications:

- **Need for a Holistic Approach:** Post-intervention interviews with government officials highlighted the limitations of isolated interventions and the need for a more holistic and integrated approach to e-governance implementation. A senior official from the Ministry of ICT emphasized, ***"We need to move beyond just putting services online. We need to rethink the entire policy framework, address issues of inter-agency coordination, and invest in long-term capacity building."*** This sentiment echoed the concerns raised during the baseline assessment regarding fragmented policy landscape and siloed systems within MDAs.
- **Importance of Local Context:** FGDs in different districts revealed significant variations in the challenges and opportunities related to e-governance adoption. This highlighted the need for policy frameworks that are flexible and adaptable to different local contexts. A community leader in Kabale stated, ***"Policies developed in Kampala often don't reflect the realities on the ground here. We need solutions that are tailored to our specific needs and challenges."*** This feedback contributed to policy recommendations emphasizing the importance of decentralized e-governance strategies and local government ownership.
- **Data Privacy and Security:** Concerns about data privacy and security, raised during the baseline assessment, persisted in the post-intervention discussions. Participants expressed a need for stronger data protection measures and greater transparency in how government agencies collect and use citizen data. A participant in a Jinja FGD stated, ***"We are willing to share our information online, but we need to be sure that it will be safe and will not be misused."*** These concerns informed policy recommendations related to strengthening the implementation of the Data Protection and Privacy Act and promoting ethical data handling practices within government.
- **Regulation of the Telecom Sector:** The need for more robust regulation of the telecommunications sector was a recurring theme in the post-intervention data, particularly in relation to internet affordability and service quality. Participants highlighted the need for policies that promote competition, encourage investment in rural infrastructure, and protect consumers from exploitative practices. As one key informant from a civil society organization put it, "***The government needs to do more to ensure that telecom companies are providing affordable and reliable internet***

access, especially in rural areas." These findings informed recommendations for strengthening the regulatory framework governing the ICT sector.

These qualitative insights, combined with the quantitative data on service delivery performance and platform usage, provided a strong evidence base for the development of context-specific policy recommendations, directly contributing to Outcome 1.

5.5.2 Evidence for Outcome 2: Informed Citizenry

The qualitative data provided compelling evidence of the project's positive impact on citizen knowledge, attitudes, and behaviours related to e-governance, demonstrating progress towards Outcome 2.

- **Increased Awareness and Understanding:** Post-intervention FGDs revealed a significant increase in awareness of e-governance services among citizens, particularly in communities where community internet champions were active. A participant in a rural FGD in Mbale district stated, *"Before the project, I didn't know that I could access government services online. But the internet champion showed us how to use the UGHUB platform and the Faayo platform. Now, I know where to find information and how to report my problems."* This increased awareness can be directly attributed to the project's interventions, particularly the community internet champion training and the district orientation workshops.

- **Enhanced Digital Literacy:** Feedback from participants in the community internet champion program indicated significant improvements in their digital literacy skills. Many champions, who initially had limited experience with online platforms, reported feeling much more confident in using computers and the internet after the training. One champion in Gulu stated, *"The training was very helpful. I learned so much about how to use different online platforms, how to stay safe online, and how to help others in my community."* This enhanced capacity translated into improved digital literacy among community members who interacted with the champions.

- **Positive Attitudes towards E-Governance:** The qualitative data also revealed a shift in attitudes towards e-governance. Many citizens who were initially skeptical or unaware of online services expressed a greater willingness to use them after interacting with the community internet champions or attending project-organized awareness campaigns. A farmer in Lira district stated, *"I used to think that the internet was only for young people in town. But after seeing how I can get information about market prices through my phone, I am now eager to learn more."* This suggests that the project's interventions were successful in demystifying e-governance and highlighting its relevance to citizens' daily lives.

- **Empowerment and Self-Efficacy:** The qualitative data provided evidence of increased citizen empowerment and self-efficacy in relation to accessing government information and services. Participants in FGDs described feeling more confident in their ability to navigate online platforms, find the information they needed, and provide feedback to the government. A woman entrepreneur in Kampala who participated in the digital literacy program stated, *"I used to be afraid of using the internet. But now, I can use it to find new customers and sell my products online. I feel much more independent."* This sense of empowerment is a key aspect of Outcome 2.

- **Use of the Faayo Platform:** The feedback on the Faayo platform was particularly encouraging. Many users described it as a valuable tool for providing feedback and holding government accountable. A user from Jinja commented, *"Faayo is a great platform. It's easy to use, and I feel like my voice is being heard. I reported a problem with garbage collection in my area, and the district council responded within a week."* This indicates that the platform was successful in facilitating citizen engagement and contributing to a more informed and empowered citizenry.

These qualitative findings, supported by illustrative quotes, provide strong evidence for the achievement of **Outcome 2 (Informed Citizenry)**. They demonstrate that the project's interventions, particularly the community internet champion program and the Faayo platform, were successful in increasing citizen awareness, improving digital literacy, fostering positive attitudes towards e-governance, and empowering citizens to engage with government online.

5.5.3 Evidence for Outcome 3: Responsive Government Entities

The qualitative data also shed light on the project's impact on the responsiveness of government entities to citizen demands, contributing to Outcome 3.

- **Increased Openness to Citizen Feedback:** Post-intervention interviews with government officials revealed a greater openness to receiving and responding to citizen feedback through online channels. Many officials, particularly those who participated in the district orientation workshops, expressed a greater understanding of the value of online citizen engagement for improving service delivery. A district official in Mbarara stated, *"The training helped us to see the importance of listening to citizens' voices. We are now more proactive in responding to online inquiries and complaints."*
- **Improved Communication and Responsiveness:** Several government agencies demonstrated improved communication and responsiveness after the interventions. For example, the Ministry of Health, after receiving feedback through the Faayo platform about long waiting times at health facilities, implemented measures to streamline patient registration processes and improve appointment scheduling. A district health officer in Gulu commented, *"The feedback we received through Faayo was very helpful. It highlighted a problem that we were not fully aware of, and it motivated us to take action."* This responsiveness was further facilitated by the capacity-building workshops, which emphasized the importance of timely and effective online communication.
- **Challenges in Responding to Online Feedback:** Despite the positive changes, some government officials expressed challenges in effectively responding to the increased volume of online feedback, particularly through the Faayo platform. A common concern was the lack of dedicated staff and resources for managing online communication channels. An official from the Ministry of Lands stated, *"We are receiving a lot of complaints through Faayo, which is good, but we don't have enough staff to respond to all of them in a timely manner."* This highlights the need for ongoing support and capacity building within MDAs to effectively manage online citizen engagement.
- **Data-Driven Decision-Making:** There was some evidence of a shift towards more data-driven decision-making within participating MDAs. Several officials reported using data from the Faayo platform and other online sources to identify service delivery gaps and inform resource allocation decisions. For example, a district planner in Lira reported using data on citizen complaints about water shortages to prioritize the allocation of funds for water infrastructure improvements.

These qualitative findings suggest that the project contributed to a gradual shift towards greater responsiveness within government entities, providing evidence for **Outcome 3 (Responsive Government Entities)**. However, they also highlight the ongoing challenges and the need for sustained effort to build capacity and institutionalize mechanisms for online citizen engagement.

5.5.4 Evidence for Outcome 4: Innovative Approaches

The qualitative data provided rich insights into the effectiveness of the project's innovative approaches, particularly the innovation challenge, the pilot projects, and the establishment of the Accountability Lab, demonstrating progress towards Outcome 4.

- **Value of the Innovation Challenge:** Participants in the innovation challenge, including those whose ideas were not selected for piloting, expressed appreciation for the opportunity to develop and showcase their solutions. They highlighted the value of the mentorship and technical support provided during the challenge. One participant stated, *"The innovation challenge was a great learning experience. It pushed us to think creatively about how to use technology to solve real-world problems in our communities."*

- **Effectiveness of the Pilot Projects:** The qualitative feedback on the pilot projects was generally positive, with stakeholders highlighting their potential for improving service delivery and citizen engagement. For example, the mobile service centers in Mbale and Pallisa were praised for bringing government services closer to people in remote areas. A community member from Mbale stated, *"It used to take me a whole day to travel to the district headquarters to get a national ID. Now, with the mobile service center, I can get it in my own village."* The IVR system for agricultural information in Lira was also well-received by farmers. One farmer commented, *"The IVR system is very useful. I can now get information about market prices and weather forecasts on my phone, which helps me to make better decisions about when to sell my crops."*

- **Challenges in Implementing Innovations:** The qualitative data also revealed challenges in implementing the innovative solutions. These included technical difficulties, resistance to change from some government officials, and the need for more sustained funding to scale up the pilots. A participant in the innovation challenge stated, *"We faced some challenges in integrating our platform with existing government systems. It took longer than we expected."* These challenges highlight the complexities of introducing and scaling up innovations within existing bureaucratic structures.

- **Role of the Accountability Lab:** The Accountability Lab was seen as a valuable platform for fostering collaboration and innovation. Participants appreciated the opportunity to share their experiences, learn from each other, and collaborate on new solutions. A civil society representative who participated in the Lab stated, *"The Accountability Lab has created a space for us to work together with government officials and other stakeholders to develop innovative solutions for improving governance."* This collaborative environment was seen as crucial for sustaining the momentum generated by the innovation challenge.

Lessons Learned from the Innovators: The feedback from innovators provided additional insights into the challenges and opportunities for fostering e-governance innovation in Uganda.

- **ShareCARD (Sandra Awilli):** Highlighted the importance of real-time, verifiable data for effective monitoring and evaluation of grassroots projects. This feedback reinforced the need for innovative data management solutions within government MDAs.

- **EMU (Ritah Asimiire):** Demonstrated the value of online platforms in fostering citizen engagement and promoting equitable resource allocation. This feedback emphasized the importance of creating safe spaces for online dialogue and participation.

- **Digital Infrastructure Solutions (Richard Titus Jakait):** Showcased the critical need for affordable internet access and devices in bridging the digital divide. This

feedback highlighted the importance of addressing infrastructure limitations to ensure equitable access to e-governance services.

- **WOUGNET's Application (Peter Ongom):** Illustrated the effectiveness of two-way communication platforms in enhancing government responsiveness to citizen concerns. This feedback underscored the need for user-friendly and accessible platforms that facilitate citizen-leader interaction.
- **Cyber Activism Platform (Oryema Edison):** Demonstrated the power of digital tools in promoting citizen advocacy and holding government accountable. This feedback highlighted the importance of leveraging technology for transparency and citizen empowerment.
- **UgLIS (Muheki Oscar):** Showcased the value of location-based platforms in improving access to information about government services. This feedback emphasized the need for innovative solutions that enhance the accessibility and efficiency of service delivery.
- **Digital Citizen Engagement Platform (Letowon Saitoti Abdi):** Highlighted the importance of inclusive digital platforms that cater to the needs of diverse communities, including those with limited digital literacy. This feedback underscored the need for capacity building and community engagement in promoting e-governance adoption.
- **Eyebyorets (Douglas Onencan):** Demonstrated the potential of assistive technologies in promoting inclusivity and accessibility for persons with disabilities. This feedback highlighted the need for innovative solutions that address the specific needs of marginalized groups.
- **TruGuard (Amanda Biwoye Yunju):** Showcased the role of digital security solutions in enhancing trust and transparency in land transactions. This feedback emphasized the importance of robust security measures in building confidence in e-governance systems.

- These qualitative findings provide strong evidence for **Outcome 4 (Innovative Approaches)**. They demonstrate that the project successfully fostered innovation through the challenge, the pilot projects, and the Accountability Lab. They also highlight the importance of ongoing support, collaboration, and adaptation to ensure the successful implementation and scaling up of innovative e-governance solutions.

5.6 Triangulation and Integration of Findings

This section synthesizes the quantitative and qualitative findings presented in the previous sections, providing a holistic assessment of the project's impact on e-governance in Uganda. By triangulating these different data sources, we gain a more comprehensive and nuanced understanding of the changes that occurred, the factors that contributed to these changes, and the challenges that remain. This integrated analysis directly addresses the overarching research questions and demonstrates the project's contribution to the four key outcomes, while also acknowledging limitations and areas for future growth.

5.6.1 Cross-Validation and Convergence of Findings

The quantitative and qualitative data generally converged, providing a consistent picture of the project's impact. The quantitative data demonstrated measurable improvements in service delivery performance, e-governance platform quality, internet usage, digital literacy, and citizen engagement. These findings were corroborated and further illuminated

by the qualitative data, which provided rich insights into the experiences, perspectives, and behaviours of different stakeholders.

For example, the quantitative finding that service delivery performance improved in participating MDAs (Table 4.4) was supported by qualitative data from interviews with government officials who described how they were using data and feedback from online platforms to improve service delivery and responsiveness. The post-intervention increase in GAPR scores was thus given further context and validity through the lived experiences shared by officials.

Similarly, the quantitative finding that internet usage for accessing government services increased in rural areas (Table 4.6) was corroborated by qualitative data from FGDs, where participants described how the community internet champions had helped them to access and utilize online services. The champions' role in bridging the digital divide, highlighted in the qualitative data, provided a deeper understanding of the mechanisms behind the increased internet usage observed in the quantitative data.

The quantitative data on the usage of the Faayo platform (Table 4.7) was further enriched by the qualitative feedback on the platform's perceived usefulness and effectiveness in facilitating citizen engagement. The positive comments from users about Faayo's ease of use and its role in giving them a voice provided a more nuanced understanding of the platform's impact beyond the raw usage numbers.

Furthermore, the improvements in eGov Quality Analyzer scores (Table 4.5) were supported by qualitative feedback from users who reported positive changes in website usability and accessibility. This triangulation of quantitative and qualitative data strengthens the validity of the findings and provides a more holistic picture of the project's impact on e-governance platform quality.

5.6.2 Addressing the Research Questions

The integrated findings directly address the overarching research questions that guided this study:

- **RQ1: What are the opportunities for the Internet in service delivery?** The findings demonstrate that the internet offers significant opportunities for improving service delivery by streamlining processes, increasing efficiency, and enhancing accessibility. The quantitative data on improved GAPR scores and increased uptake of online services, coupled with qualitative data on positive user experiences and government officials' perceptions, provide strong evidence for these opportunities. The project's interventions, such as the district orientation workshops and the development of the Faayo platform, further highlighted the practical ways in which the internet can be leveraged for service delivery improvement. The positive feedback on the WOUGNET application from the innovation challenge also supports this, showing how targeted digital tools can enhance service delivery.
- **RQ2: What are the capacity gaps hindering the utilization of the Internet by government agencies in the effort to improve transparency and accountability in service delivery?** [1] The findings revealed several capacity gaps, including limited digital literacy among both public servants and citizens, inadequate ICT infrastructure (particularly in rural areas), and resistance to change within some government agencies. The quantitative data on low digital literacy scores and limited internet access in rural areas, combined with qualitative data on government officials' concerns about infrastructure and staff skills, highlighted the magnitude of these gaps. The project's interventions, such as the community internet champion training and capacity-building workshops, directly addressed these gaps, and the post-intervention data showed improvements in these areas.

- **RQ3: How can central and local government entities become more responsive to information demands by the citizens through the utilization of the Internet in service delivery?** The project demonstrated that a combination of capacity building, user-friendly platforms, and innovative approaches can enhance government responsiveness. The quantitative data on improved response rates to online inquiries and the resolution of complaints submitted through Faayo, along with qualitative data on increased openness to citizen feedback among government officials, provide evidence of this increased responsiveness. The district orientation workshops, the development of the Faayo platform, and the piloting of innovative solutions like the community-based digital feedback platform in Gulu all contributed to this outcome. The success of the WOUGNET application in facilitating communication between citizens and leaders further supports this finding.
- **RQ4: What innovative approaches and methodologies can be developed to activate the supply and demand sides of accountability in Internet-based initiatives?** The innovation challenge, the pilot projects, and the establishment of the Accountability Lab were central to addressing this question. The quantitative data on the participation in the innovation challenge and the outcomes of the pilot projects, combined with qualitative data on the value of these initiatives, demonstrated the effectiveness of these approaches in fostering innovation. The specific innovations piloted, such as ShareCARD, EMU, the IVR system for agricultural information, and the Eyebyorets smart glasses, showcased the potential of diverse technological solutions in activating both the supply and demand sides of accountability.

5.6.3 Achievement of Project Outcomes – Roses, Thorns, and Buds

Outcome 1: Evidence-Based Policy Guidance

- **Roses:** The project generated a wealth of both quantitative and qualitative data that informed the development of evidence-based policy recommendations. The combination of adapted GAPR data, eGov Quality Analyzer scores, survey data, interview and FGD findings, and insights from the innovation challenge provided a robust evidence base for policy guidance. For example, the data on the positive impact of digital literacy training on service delivery performance informed recommendations for strengthening digital literacy programs within the public sector and providing basic education on ICT. Similarly, the findings on the challenges related to internet access in rural areas informed recommendations for infrastructure development and policy interventions to bridge the digital divide. The feedback on specific laws, such as the Computer Misuse Act, directly contributed to recommendations for policy reform that would balance security with online freedoms. The project also successfully engaged with policymakers through workshops and policy briefs, disseminating key findings and recommendations.
- **Thorns:** Despite the rich data generated, translating this evidence into concrete policy changes proved to be a slower process than anticipated. Bureaucratic hurdles, resistance to reform from some quarters, and the need for further consultations and consensus-building presented challenges to immediate policy impact. Additionally, the project's timeframe limited the ability to fully assess the long-term impact of the policy recommendations.
- **Buds:** The project has laid a strong foundation for ongoing policy advocacy. The established relationships with policymakers, the evidence generated, and the momentum created through the project's activities provide a springboard for future engagement and policy influence. The Accountability Lab, in particular, holds promise as a platform for continued dialogue and collaboration between researchers,

policymakers, and civil society on issues of e-governance policy reform. There is potential to further develop and refine the policy recommendations based on longer-term monitoring and evaluation of the project's impact.

Outcome 2: Informed Citizenry

- **Roses:** The project demonstrably fostered a more informed citizenry through the community internet champion training, the development and launch of the Faayo platform, and the broader awareness-raising activities. The quantitative data showed an increase in internet usage for accessing government services, particularly in rural areas. Digital literacy scores improved significantly among those who interacted with the community internet champions. The Faayo platform registered a growing number of users and facilitated the submission of thousands of service reviews and complaints. Qualitative data highlighted increased citizen confidence in using online platforms and a greater awareness of their rights and how to demand accountability. The success of initiatives like the WOUGNET application in facilitating citizen-leader interactions further supports this outcome.
- **Thorns:** Despite these successes, the project faced challenges in achieving widespread adoption of e-governance services, particularly among marginalized communities. Digital literacy levels remained relatively low in some areas, and the digital divide persisted. The usage of the Faayo platform, while encouraging, was not as widespread as initially hoped, indicating a need for continued outreach and promotion. Some FGD participants expressed concerns about the potential for their feedback to be ignored or for them to face repercussions for criticizing government services.
- **Buds:** The community internet champion model proved to be a highly effective approach for promoting digital literacy and e-governance adoption at the grassroots level. There is significant potential to scale up this model and further empower champions to become trainers themselves, creating a sustainable network of digital ambassadors. The Faayo platform also presents a valuable opportunity for continued growth and development. Future iterations could incorporate features such as multilingual support, offline functionality, and integration with other e-governance platforms.

Outcome 3: Responsive Government Entities

- **Roses:** The project contributed to increased responsiveness of government entities through capacity-building workshops, the provision of citizen feedback through the Faayo platform, and the piloting of innovative solutions. The quantitative data showed improvements in GAPR scores, increased response rates to online inquiries, and a moderate increase in the resolution of complaints submitted through Faayo. Qualitative data indicated a greater openness among government officials to receiving and responding to citizen feedback online. The adoption of innovations like ShareCARD by some MDAs demonstrated a growing willingness to embrace data-driven approaches to improve service delivery.
- **Thorns:** Despite these positive changes, challenges remained in institutionalizing a culture of responsiveness within some MDAs. Resistance to change, bureaucratic inertia, and limited resources for managing online engagement hindered progress. The qualitative data highlighted concerns from some government officials about the workload associated with responding to online feedback and the lack of clear guidelines for online engagement. The project also found that improvements in responsiveness were not uniform across all MDAs and districts, indicating a need for more targeted interventions.

- **Buds:** The project demonstrated the potential of e-governance to enhance government responsiveness. There is an opportunity to build on this momentum by further strengthening the capacity of MDAs to manage online citizen engagement, developing clear guidelines and protocols for responding to online feedback, and integrating citizen feedback mechanisms into existing performance management systems. The district-level e-governance roadmaps developed during the workshops provide a valuable framework for continued progress in this area.

Outcome 4: Innovative Approaches

- **Roses:** The project successfully fostered innovation in e-governance through the innovation challenge, piloting diverse solutions, and establishing the Accountability Lab. The quantitative data on the number of innovation challenge submissions, the reach of the pilot projects, and the specific metrics for each innovation, combined with qualitative data on the value of these initiatives and the collaborative environment fostered by the Lab, provide compelling evidence for achieving this outcome. The diverse innovations piloted, such as the mobile service centers, the IVR system for farmers, the smart glasses for the visually impaired (Eyebyorets), and the secure land transaction platform (TruGuard), demonstrated the breadth of innovative approaches that were explored and their potential for addressing specific challenges in the Ugandan context. The ShareCARD innovation, with its focus on grassroots project monitoring, and the EMU platform, emphasizing equitable resource allocation, further showcased the potential of technology to enhance transparency and accountability.
- **Thorns:** The project faced challenges in scaling up the pilot innovations and ensuring their long-term sustainability. Limited funding, technical challenges, and the need for ongoing support and maintenance were identified as key barriers. The qualitative data highlighted concerns from some innovators about the difficulty of navigating bureaucratic processes and securing government buy-in for scaling up their solutions.
- **Buds:** The innovation challenge and the Accountability Lab created a strong foundation for continued innovation in e-governance. There is significant potential to build on the lessons learned from the pilot projects and to further develop and refine the innovative solutions. The Accountability Lab, in particular, holds promise as a platform for fostering collaboration, sharing best practices, and supporting the development of a vibrant e-governance innovation ecosystem in Uganda. There is also an opportunity to explore new technologies, such as Artificial Intelligence and blockchain, to further enhance e-governance solutions. The positive reception of innovations like Eyebyorets and TruGuard demonstrates the potential for technology to address specific challenges faced by marginalized groups and to improve the efficiency of government processes

6.0 Implications And Recommendations

This section synthesizes the key findings of the action research project and translates them into actionable recommendations for practitioners and policymakers. It builds upon the integrated analysis presented in the "Findings and Analysis" section, drawing out the practical implications of the research and providing a roadmap for future e-governance initiatives in Uganda. The recommendations are organized around key thematic areas and are directly linked to the project's findings and outcomes. While acknowledging the progress made by the Ugandan government in promoting e-governance, this section focuses on identifying gaps and proposing innovative solutions that go beyond the existing frameworks.

The recommendations are organized around key thematic areas and are directly linked to the project's findings and outcomes.

6.1 Implications for Policy and Practice

The findings of this research underscore the transformative potential of e-governance to enhance service delivery, promote transparency and accountability, and foster citizen engagement in Uganda. However, they also highlight the need for a multi-faceted approach that addresses not only technological infrastructure but also the social, economic, and political factors that influence the adoption and effectiveness of e-governance initiatives. The project's focus on capacity building, innovation, and citizen engagement has proven effective in addressing some of the identified challenges, but sustained effort and political commitment are needed to achieve scalable and lasting impact.

Several key implications for policy and practice have emerged from this study:

- **Prioritizing Hyperlocal Digital Inclusion:** The persistent digital divide, particularly between urban and rural areas, demands targeted interventions that go beyond simply expanding internet access. This project highlights the need for **hyperlocal** digital inclusion strategies that address the specific needs and contexts of different communities, recognizing that a one-size-fits-all approach is insufficient. The success of the community internet champion model demonstrates the importance of leveraging existing social structures and trusted individuals to promote digital literacy and e-governance adoption.
- **From Capacity Building to Capacity Strengthening:** While the project demonstrated the value of capacity building for government officials, the findings also reveal the need to move beyond one-off training programs towards a more holistic approach to **capacity strengthening**. This involves creating an enabling environment within MDAs that supports continuous learning, knowledge sharing, and the integration of digital tools into everyday workflows. It also requires addressing issues of staff

retention and motivation to ensure that trained personnel remain in the public sector.

- **Fostering a Culture of User-Centric Innovation:** The innovation challenge and the Accountability Lab demonstrated the potential for fostering a vibrant ecosystem of e-governance innovation in Uganda. However, the findings also highlight the need to shift from a technology-driven approach to a more **user-centric** one. This involves prioritizing solutions that are designed with a deep understanding of citizens' needs, preferences, and contexts, and that are co-created with users throughout the development process.
- **Beyond Transparency to Interactive Accountability:** The project's findings underscore the importance of moving beyond simply making information available online to creating truly interactive platforms for citizen engagement and feedback. The Faayo platform demonstrated the potential of such platforms, but also highlighted the need for mechanisms that ensure government responsiveness and demonstrate a tangible impact of citizen input on decision-making processes. This requires a shift from a focus on transparency as an end in itself to a focus on **interactive accountability**, where citizens are active participants in shaping public services.
- **Adaptive Governance and Policy Experimentation:** The action research approach adopted in this project highlighted the need for more **adaptive governance** in the e-governance space. This involves creating mechanisms for continuous monitoring, evaluation, and learning, and being willing to adjust policies and programs based on real-time data and feedback. It also involves fostering a culture of **policy experimentation**, where new approaches and technologies are piloted and rigorously evaluated before being scaled up.

6.2 Key Recommendations

6.2.1 Enhance Digital Inclusion and Accessibility

Recommendation 1: The Government of Uganda should move beyond a focus on expanding internet access to implementing **hyperlocal digital inclusion strategies** tailored to the specific needs of different communities, particularly in rural and underserved areas. This involves:

- **Community-owned and managed digital infrastructure:** Pilot and scale up models for community-owned and managed internet infrastructure, such as community networks, where local communities are empowered to build, operate, and maintain their own internet infrastructure. This could involve providing technical and financial support to communities to establish and manage internet cooperatives or other forms of community-owned networks, drawing inspiration from successful models in other countries. This addresses not just access but also local ownership and sustainability.
- **Targeted digital literacy programs:** Develop and implement digital literacy programs that are tailored to the specific needs and contexts of different communities, including programs specifically designed for women, older adults, persons with disabilities, and other marginalized groups. These programs should go beyond basic computer skills and include training on online safety, critical evaluation of online information, and the use of e-governance platforms for specific needs (e.g., accessing agricultural information, applying for social services).
- **Leveraging existing community structures:** Integrate digital literacy training and e-governance promotion into existing community structures, such as schools, health centers, and community-based organizations. This could involve partnering with local NGOs and community leaders to deliver training and support.

- **Promote adoption of the community internet champion model:** This will involve creating incentives for districts to take on the training of internet champions to address their unique needs.

The project demonstrated the effectiveness of the community internet champion model in bridging the digital divide, but also highlighted the need for more localized and targeted approaches. The baseline assessment revealed significant disparities in internet access and digital literacy across different regions and demographic groups. The feedback from champions highlighted the varying challenges faced by different communities and the need for tailored solutions.

The project demonstrated the effectiveness of the community internet champion model in bridging the digital divide, but also highlighted the need for more localized and targeted approaches.

Recommendation 2: The Ministry of ICT and National Guidance, in collaboration with NITA-U and UCC, should develop and implement a comprehensive **"Digital Skills for All" framework** that goes beyond basic digital literacy and includes advanced skills relevant to the digital economy framework should include:

- **Modular, competency-based training programs:** Offer a range of training programs that cater to different skill levels and learning needs, from basic computer skills to advanced digital skills such as data analytics, coding, and digital marketing.
- **Focus on youth and women:** Prioritize the training of youth and women, who often face greater barriers to accessing digital technologies and participating in the digital economy. This could involve partnering with schools, universities, and women's organizations to deliver targeted training programs.
- **Integration with existing government programs:** Integrate digital skills training into existing government programs, such as the Parish Development Model and other livelihood programs, to ensure wider reach and impact.
- **Certification and recognition:** Develop a system for certifying digital skills and recognizing prior learning to enhance the employability of individuals who complete the training programs.

The project demonstrated the positive impact of digital literacy training on internet usage and e-governance adoption. However, it also highlighted the need for more advanced skills training to enable citizens to fully participate in the digital economy. The baseline survey revealed that only 35% of public servants felt confident in using online platforms, indicating a significant skills gap within the public sector.

6.2.2 Strengthen Government Capacity and Responsiveness

Recommendation 3: NITA-U should develop and implement a **"Responsive E-Governance Framework"** for all MDAs and local governments, building on the lessons learned from the Faayo platform and other successful citizen engagement initiatives. This framework should include:

- **Mandatory response time standards:** Establish clear standards and protocols for responding to citizen inquiries and complaints submitted through online platforms, with specific timeframes for different types of requests.

- **Real-time feedback dashboards:** Develop and implement real-time dashboards that track key performance indicators related to responsiveness, such as response times, resolution rates, and citizen satisfaction scores. These dashboards should be accessible to both government officials and the public to promote transparency and accountability.
- **Incentive mechanisms:** Introduce incentives for MDAs and local governments that demonstrate significant improvements in responsiveness, such as performance-based bonuses or public recognition awards.
- **Escalation procedures:** Develop clear procedures for escalating unresolved complaints or complex issues to higher levels of authority within the government.

The project demonstrated the potential of online platforms like Faayo to enhance government responsiveness, but also highlighted the need for clear guidelines and protocols to ensure effective utilization. The quantitative data showed that only 48% of complaints submitted through Faayo were resolved, indicating a need for improved complaint resolution mechanisms. The qualitative data from interviews with government officials revealed a need for more resources and training to effectively manage online citizen engagement.

Recommendation 4: The Ministry of Public Service, in collaboration with NITA-U, should develop and implement a **"Digital Leadership Program"** for senior government officials, focusing on fostering a culture of innovation, data-driven decision-making, and citizen-centric service delivery. This program should go beyond basic digital literacy and include modules on:

- **Change management:** Strategies for leading and managing digital transformation within government agencies.
- **Data analytics for decision-making:** Training on how to use data from e-governance platforms and other sources to inform policy decisions and improve service delivery.
- **Human-centered design:** Principles and practices of user-centered design for developing and implementing e-governance services that meet the needs of citizens.
- **Cybersecurity and data privacy:** Best practices for ensuring the security and privacy of citizen data in the context of e-governance.

The project's findings highlighted the importance of strong leadership and political will in driving the digital transformation agenda. The baseline assessment revealed resistance to change among some public servants and a lack of understanding of the strategic importance of e-governance. The "Digital Leadership Program" would address these challenges by equipping senior officials with the knowledge, skills, and mindset needed to effectively lead and manage digital transformation within their respective agencies.

6.2.3 Foster a Sustainable Innovation Ecosystem

The Government should establish a **"National E-Governance Innovation Fund"** with a specific focus on supporting the development and scaling up of solutions that address the needs of marginalized communities and promote inclusivity. The fund should:

- **Prioritize innovations that leverage accessible technologies:** Focus on solutions that utilize low-bandwidth technologies, such as SMS and IVR, to reach citizens with limited internet access. The success of the IVR pilot project in Lira demonstrates the potential of such technologies.
- **Promote open-source solutions:** Encourage the development of open-source e-governance solutions that can be easily adapted and replicated across different contexts, reducing costs and fostering local ownership.

- **Incorporate a "social impact" evaluation criterion:** Assess innovation proposals not only on their technical feasibility and scalability but also on their potential to address social inequalities and promote inclusion.
- **Provide mentorship and technical support:** Offer ongoing mentorship and technical support to innovators, particularly those from marginalized communities, to help them develop and refine their solutions.

The innovation challenge demonstrated the existence of a vibrant community of innovators in Uganda, but also highlighted the challenges they face in securing funding and technical support. The pilot projects, such as ShareCARD and Eyebyorets, showcased the potential of locally developed solutions to address specific development challenges. The project findings also revealed a need for innovations that are tailored to the needs of marginalized groups and that leverage accessible technologies.

The innovation challenge demonstrated the existence of a vibrant community of innovators in Uganda, but also highlighted the challenges they face in securing funding and technical support.

Recommendation 6: Transform the Accountability Lab into a permanent "National E-Governance Innovation Hub" with regional chapters, providing ongoing support, resources, and networking opportunities for e-governance innovators. The Hub should:

- **Establish regional chapters:** Create regional chapters of the Hub to ensure that innovators in different parts of the country have access to support and resources.
- **Develop an online platform:** Create an online platform for the Hub to facilitate knowledge sharing, collaboration, and mentorship among innovators, government officials, and other stakeholders.
- **Offer incubation and acceleration services:** Provide incubation and acceleration services to promising e-governance startups, including technical assistance, business development support, and access to funding opportunities.
- **Host regular hackathons and innovation challenges:** Organize regular events to stimulate innovation and identify new solutions to emerging challenges in the e-governance space.
- **Curate and disseminate best practices:** Develop a repository of best practices, case studies, and toolkits on e-governance innovation, drawing on lessons learned from the innovation challenge, pilot projects, and other initiatives.

The Accountability Lab proved to be a valuable platform for fostering collaboration and knowledge sharing during the project. Qualitative data from participants highlighted the benefits of the Lab's workshops and networking events. The establishment of a permanent national hub would build on this success and create a sustainable ecosystem for e-governance innovation in Uganda.

6.2.4 Strengthen the Policy and Regulatory Environment

Recommendation 7: The Ministry of ICT and National Guidance should establish a **"Digital Rights Task Force"** to review and propose amendments to the Computer Misuse Act, the Anti-Terrorism Act, and other relevant legislation. The Task Force should:

- **Include representatives from civil society, legal experts, and the private sector:** Ensure broad stakeholder participation in the review process.

- **Benchmark against international best practices:** Conduct a comparative analysis of similar legislation in other countries, drawing on international human rights standards and best practices in regulating online speech.
- **Develop clear definitions and guidelines:** Provide clear definitions of key terms, such as "cyber harassment" and "offensive communication," to prevent subjective interpretation and arbitrary enforcement.
- **Propose safeguards against misuse:** Introduce safeguards to prevent the misuse of these laws to suppress legitimate dissent or limit freedom of expression.
- **Conduct public consultations:** Organize public consultations to gather input from citizens on the proposed amendments and ensure that the revised legislation reflects the needs and concerns of all stakeholders.

The project's findings, particularly the concerns raised by civil society representatives and the documented instances of the Computer Misuse Act being used to target government critics, highlight the urgent need for legislative reform. This recommendation directly addresses Outcome 1 by contributing to a more enabling policy environment for e-governance.

The project's findings, particularly the concerns raised by civil society representatives and the documented instances of the Computer Misuse Act being used to target government critics, highlight the urgent need for legislative reform.

Recommendation 8: NITA-U, in collaboration with the Office of the Data Protection Commissioner, should develop and implement a comprehensive "E-Governance Data Governance Framework" to guide the collection, storage, use, and sharing of data by government agencies in the context of e-governance. This framework should:

- **Go beyond compliance with the Data Protection and Privacy Act:** Establish data governance principles and practices that exceed the minimum requirements of the law, incorporating best practices from other countries and promoting a culture of responsible data handling within government.
- **Address specific challenges of different sectors:** Develop sector-specific guidelines for data governance in areas such as health, education, and social services, recognizing the unique sensitivities and challenges associated with different types of data.
- **Promote data interoperability and sharing:** Establish standards and protocols for data interoperability and sharing between government agencies, while ensuring that data privacy and security are maintained.
- **Establish a data ethics board:** Create an independent board to provide guidance on ethical issues related to the use of data in e-governance, and to review data governance practices within government agencies.
- **Incorporate data minimization principles:** Encourage MDAs to collect and retain only the minimum necessary data for the shortest period required for service delivery, reducing the risks of data breaches and misuse.

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