



**UNIVERSITY**  
*of* **LUSAKA**

**SCHOOL OF TECHNOLOGY AND SOCIAL SCIENCES**

**An Assessment of the Efficiency of the Government Backbone Unified System on Public  
Service Delivery: Case Study of RTSA, Lusaka.**

BY

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of the requirements for the Award of the Degree of Bachelor of Arts in Public  
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## DECLARATION

This academic study is my original work and it has not been shared for any academic consideration in any university or learning institution of higher education.

Signature .....  ..... Date: 22<sup>nd</sup> February, 2026

This dissertation proposal has been presented for examination with my approval as the University Supervisor.

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## **DEDICATION**

This work is dedicated to my parents, Mr. and Mrs. Brown Soko, for their unwavering support, sacrifice, and encouragement throughout my academic journey. To my siblings and friends who stood by me, thank you for your belief in my abilities.

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## ABSTRACT

The study examined the effects of the Government Backbone Unified System (BUS) on the public service delivery at the Road Transport and Safety Agency (RTSA) in Lusaka District. The specific objectives were to find out the extent to which the implementation of the Government Backbone Unified System (BUS) had improved operational efficiency at RTSA in Lusaka District, to identify the challenges faced by RTSA during the implementation of the Government Backbone Unified System (BUS) and the strategies used to address them and to determine the effects of the BUS system on customer satisfaction. The study adopted a qualitative research approach, employing a descriptive and cross-sectional research design to capture participants' experiences and perceptions at a single point in time. The study population comprised RTSA employees, RTSA customers, and key stakeholders involved in the planning, implementation, and oversight of the BUS system in Lusaka District. A total sample of 100 respondents was selected using purposive sampling, comprising 35 RTSA employees, 45 RTSA customers, and 20 key stakeholders. Data was collected using semi-structured interviews for employees and stakeholders, and structured questionnaires with open-ended components for customers. The use of multiple data collection tools enabled triangulation and enhanced the credibility of the findings. Data was analysed using thematic analysis, which involved coding, categorizing, and interpreting recurring patterns and themes related to service efficiency, system performance, user satisfaction, and implementation challenges.

The findings revealed that the Government Backbone Unified System has significantly improved public service delivery at RTSA by enhancing operational efficiency, reducing service turnaround time, improving data accuracy, strengthening accountability, and facilitating inter-departmental coordination. The system streamlined previously fragmented and manual processes, resulting in faster and more transparent service provision. Stakeholders and employees reported improved workflow efficiency and better access to real-time information, while customers expressed increased satisfaction due to reduced waiting times and clearer service procedures. However, the study also identified key challenges affecting system effectiveness, including intermittent network connectivity, power outages, system downtime, limited staff training, and resistance to change during the initial stages of implementation. These challenges occasionally disrupted service delivery and undermined customer satisfaction. Based on the findings, the study recommends that RTSA invest in reliable ICT infrastructure, including backup power and stable network connectivity, to minimize system disruptions. Continuous capacity-building and refresher training programs should be implemented to enhance staff competence and reduce resistance to change. The study contributes to knowledge on digital governance and public sector reform by providing empirical evidence on the role of integrated government systems in enhancing public service delivery in developing country contexts.

**Key terms:** Government Backbone Unified System, public service delivery, operational efficiency, digital governance, RTSA.

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# **CHAPTER ONE**

## **INTRODUCTION AND BACKGROUND**

### **1.0 Overview**

The global public sector has been undergoing a profound transformation driven by digital technology. Governments worldwide are increasingly deploying integrated information systems to streamline bureaucratic processes, enhance transparency, and improve the quality of services delivered to citizens Harvard University, United Nations (2020).

In Zambia, a key initiative in this digital governance agenda that has been adopted is the Government Backbone Unified System (BUS), a platform designed to interconnect various government agencies and automate service delivery processes. This study focused on assessing the efficiency of this system, with a specific case study of its implementation at the Road Transport and Safety Agency (RTSA) in Lusaka. As a critical agency responsible for vehicle registration, driver licensing, and road safety compliance, RTSA's performance directly impacts economic activity and public welfare. Therefore, understanding how the BUS has influenced its service delivery is crucial for evaluating the success of Zambia's e-government investments and for informing future digital policy (Smart Zambia Institute, 2019).

### **1.1 Background to the study**

The introduction of Information and Communication Technologies (ICTs) in the public sector had brought about significant improvements in administrative processes and service delivery (Heeks, 2006). In Zambia, the government's adoption of various ICT systems, including the Government Backbone Unified System (BUS), represented a concerted effort to modernise and streamline public service operations (Smart Zambia Institute, 2019). The Government Backbone Unified System (BUS) first became operational at Road Transport and Safety Agency (RTSA) around May 2020, when the online payment portal under the Government Service Bus was unveiled. The BUS system was developed with the aim of improving the efficiency of service delivery in government institutions, particularly those involved in citizen services. By automating many processes and enhancing communication channels within and between government departments, the BUS system

was expected to reduce delays, improve service accuracy, and ultimately increase public satisfaction (World Bank, 2017).

In particular, the Road Transport and Safety Agency (RTSA), whose responsibility was regulating road transport in Zambia, had been at the forefront of these efforts. RTSA was tasked with managing vehicle registrations, road safety inspections, and driver licensing, among other functions. Historically, these processes had been plagued by inefficiencies, including long processing times, manual record-keeping, and poor customer service (GRZ, 2020). The introduction of the Government Unified System (BUS) at Road Transport and Safety Agency (RTSA) was intended to address these issues by digitising and automating operations, thereby enhancing overall service delivery (Nkhuwa, 2021).

The role of ICT in improving public service delivery had been widely documented in the literature. Studies by Anderson, Oluoch and Nyaribo (2016) and Ravindra (2018) demonstrated that the adoption of technology in the public sector led to greater efficiency, transparency, and accessibility of government services. The World Bank (2017) also highlighted the potential for digital platforms to revolutionise public service delivery by enabling faster processing times, reducing the likelihood of errors, and improving overall service quality.

Despite these positive outcomes, the extent to which such systems actually achieved these objectives in developing countries such as Zambia remained unclear (Nkhuwa, 2021).

## **1.2 Statement of the problem**

Globally, Information and Communication Technology (ICT) is widely recognized as a critical tool for improving efficiency, transparency, accountability, and citizen satisfaction in public service delivery (Heeks, 2021). In response, the Government of the Republic of Zambia has invested heavily in digital transformation initiatives, notably the Government Backbone Unified System (BUS), designed to integrate government systems, enhance coordination, reduce service delays, and improve access to public services. The BUS has been implemented across several public institutions, including the Road Transport and Safety Agency (RTSA), where it is expected to streamline key service processes such as licensing, registration, and compliance management.

Policy and institutional reports suggest that the system has strong potential to enhance operational efficiency and service quality (Smart Zambia Institute, 2020).

However, despite these anticipated benefits, there is limited empirical evidence on the actual effects of the Government BUS on public service delivery at RTSA, particularly in Lusaka District. Existing e-government literature in Zambia predominantly focuses on policy frameworks, system design, and implementation strategies, with minimal attention to post-implementation service delivery outcomes (World Bank, 2021). Consequently, little is known about how the BUS has affected critical performance indicators such as transaction processing time, service reliability, staff productivity, and citizen satisfaction at RTSA. This absence of independent, context-specific evaluation represents a clear gap in knowledge and forms the core research problem of this study.

Addressing this gap is essential because continued investment in digital government systems without evidence-based performance assessment may undermine public sector reform objectives. Without reliable data on the actual impact of the BUS at RTSA, policymakers and managers lack the empirical basis to improve system functionality, resolve operational challenges, and justify further investment or replication in other institutions. Moreover, citizens who rely on RTSA services may continue to experience inefficiencies that remain undocumented, potentially weakening trust in digital governance initiatives. Therefore, assessing the effects of the Government Backbone Unified System on public service delivery at RTSA in Lusaka District is necessary to inform policy decisions, enhance system effectiveness, and contribute to the body of knowledge on e-government service delivery in Zambia.

### **1.3 Objectives of the study**

#### **1.3.1 General Objective**

To assess the effects of the Government Backbone Unified System (BUS) on the public service delivery at the Road Transport and Safety Agency (RTSA) in Lusaka District.

#### **1.3.2 Specific Objectives**

**The objectives are:**

1. To find out the extent to which the implementation of the Government Backbone Unified System (BUS) had improved operational efficiency at RTSA in Lusaka District.

2. To identify the challenges faced by RTSA during the implementation of the Government Backbone Unified System (BUS) and the strategies used to address them.
3. To determine the effects of the BUS system on customer satisfaction.

### **1.3.3 Research questions**

This study was guided by the following research questions:

1. How did the implementation of the Government Backbone Unified System (BUS) influence operational efficiency at RTSA in Lusaka District?
2. What challenges did RTSA encounter in the implementation of the BUS system, and how were these challenges addressed?
3. What extent did the government backbone unified system affect customer satisfaction?

These questions were critical for gaining a comprehensive understanding of the effect of the BUS system on RTSA's service delivery and for identifying areas where improvements could have been made.

## **1.4 Significance of the study**

The findings of this study were expected to be valuable to several stakeholders, including:

### **1.4.1 Government and Policy Makers**

This study provided insights into the effectiveness of the BUS system and informed future ICT policies and strategies aimed at enhancing public service delivery. Policymakers benefited from evidence-based recommendations on how to optimise the use of ICT in governance (World Bank, 2017; UNDP, 2020). The use of digital infrastructure in public institutions was increasingly recognised as essential for achieving efficiency, transparency, and accountability (Heeks, 2006).

### **1.4.2 RTSA Management**

The study's findings assisted RTSA in identifying the strengths and weaknesses of the BUS system and provided practical recommendations for improving operational efficiency (Nkhuwa, 2021).

Understanding the internal performance of the BUS system enabled RTSA to make informed decisions about ICT improvements and staff training (Smart Zambia Institute, 2019).

#### 1.4.3 Academia and Researchers

The study contributed to the growing body of literature on ICT in public administration, offering new perspectives on the challenges and opportunities of digital systems in service delivery (Anderson, Oluoch and Nyaribo, 2016). It also served as a reference for future research on ICT applications in developing countries, where such systems often faced unique constraints related to infrastructure and institutional capacity (Ravindra, 2018).

#### 1.4.4 General Public

The study's recommendations aimed to improve the quality of services provided by RTSA, directly benefiting citizens who relied on the agency for vehicle licensing, registration, and road safety services. Improved service delivery enhanced public trust in government institutions and increased user satisfaction (GRZ, 2020; World Bank, 2017).

### **1.5 Delimitations of the study**

The study focused specifically on RTSA's operations in Lusaka District, including the use of the Government Backbone Unified System (BUS) in vehicle registration, licensing, and customer service. The study was limited to the perspectives of RTSA employees, including management and staff involved in the implementation of the system, as well as a sample of customers who had interacted with the agency during the period of study. The findings might not have been directly applicable to other regions or government agencies outside of RTSA.

### **1.6 Limitations of the study**

While carefully designed, this study acknowledged several methodological limitations that should be considered when interpreting its findings.

### **1.6.1 Use of a Non-Probability Sampling Technique**

The study employed purposive and convenience sampling to select respondents from RTSA employees, customers, and stakeholders in Lusaka. While this approach was practical and effective for gaining in-depth qualitative insights, it limited the statistical representativeness of the sample (Etikan, Musa & Alkassim, 2016). The findings reflect the experiences of accessible groups and may not capture the full diversity of opinions across all users of the BUS system in Zambia.

### **1.6.2 Potential for Social Desirability and Recall Bias**

The reliance on self-reported data through interviews and surveys introduced the possibility of bias. Respondents, particularly employees, might have felt pressured to provide answers that align with official policy (social desirability bias) (Bryman & Bell, 2015). Furthermore, customers and staff recalling pre-BUS experiences were subject to recall bias, where their memories of past inefficiencies were influenced by their current perceptions.

### **1.6.3 Cross-Sectional Design and Causality**

The research adopted a cross-sectional design, collecting data at a single point in time. This design was excellent for identifying associations and rich descriptions but did not permit strong causal inferences (Saunders, Lewis & Thornhill, 2019). While we can report that high efficiency was associated with BUS use, we cannot definitively state that the BUS alone caused all the reported improvements, as other unmeasured factors (e.g., concurrent management reforms) could have contributed.

### **1.6.4 Geographical Limitation**

Confining the study to the Lusaka District RTSA office meant the findings are context-specific. The challenges and efficiencies experienced in an urban center with relatively better infrastructure and ICT literacy may differ significantly from those in rural or peri-urban RTSA branches, where connectivity, power stability, and user familiarity with technology present greater hurdles (World Bank, 2020).

### **1.6.5 Limited Technical System Audit**

The study assessed the efficiency outcomes of the BUS from a user and managerial perspective but did not include a formal technical audit of the system's architecture, code, or security features. Deeper technical vulnerabilities or design flaws that do not manifest obviously in daily use may therefore remain unidentified. In conclusion, by transparently acknowledging these limitations, the study maintained academic integrity and provided a clear context for its conclusions, while also pointing to areas where future research can build upon and extend its findings.

## 1.7 Definitions of key terms and concepts

For clarity, the following key terms and concepts are defined and used in the study

**Government Backbone Unified System (BUS):** A centralized digital infrastructure implemented by the Government of Zambia to integrate information systems across public institutions, enabling secure data sharing, automated workflows, and coordinated service delivery to improve efficiency and transparency in government operations (Smart Zambia Institute, 2020).

**Public Service Delivery:** The process through which government institutions plan, manage, and provide services to citizens and businesses, focusing on accessibility, efficiency, accuracy, and quality in meeting public needs and expectations (United Nations, 2023).

**Operational Efficiency:** The capacity of an organization, such as RTSA, to deliver services using minimal time, cost, and resources while maintaining effectiveness, particularly through the use of digital systems like the BUS to streamline processes and reduce duplication (OECD, 2022).

**Customer Satisfaction:** The extent to which service users perceive that public services meet or exceed their expectations in terms of speed, reliability, fairness, and overall service experience, as influenced by interactions with digital service platforms (ISO, 2021).

**Service Quality:** The overall standard of public services delivered to citizens, measured through attributes such as reliability, responsiveness, accuracy, and consistency of services provided through ICT-enabled systems (Parasuraman, 2020).

**Digital Government:** The use of digital technologies, data, and integrated systems by government institutions to transform public administration, enhance service delivery, and promote transparency, efficiency, and citizen participation (OECD, 2023).

**System Integration:** The process of linking multiple information systems, applications, and databases to function as a unified platform, enabling seamless data exchange and coordinated operations across government agencies (Laudon, 2022).

**Staff Productivity:** The level of efficiency and effectiveness with which employees perform assigned tasks, measured by output relative to time and resources, and enhanced through automation and digital workflow systems such as the BUS (Davenport, 2021).

**Transaction Processing Time:** The duration required to complete a service request from initiation to final output, such as licensing or registration, often used as a key performance indicator in assessing digital service delivery efficiency (World Bank, 2022).

**E-Government:** The application of information and communication technologies by government institutions to deliver public services, manage internal operations, and engage citizens in a more efficient, transparent, and accountable manner (Heeks, 2022).

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction numbering**

This chapter provided a review of the existing literature on the efficiency of the Government Backbone Unified System (BUS). The review spanned global, regional, and local perspectives on how technology could have enhanced public service efficiency. Public service delivery was a key aspect of governance that had seen profound transformations due to technological innovations (UNDP, 2020). As such, the chapter began by exploring the concept of public service delivery systems, followed by an in-depth look at the role of technology in improving these systems. It then moved on to a detailed discussion of the Government BUS system, examining its implementation and efficiency.

#### **2.1.0 Influence of the Implementation of the Government Backbone Unified System (BUS) on Operational Efficiency: Global, Regional and Local Perspectives.**

Operational efficiency in public institutions refers to the ability of an organisation to deliver services using minimal resources while maximising output, accuracy, timeliness, and service quality. In government agencies, operational efficiency is reflected in reduced processing time, improved record management, enhanced transparency, cost reduction, and improved customer satisfaction. The implementation of integrated digital systems such as the Government Backbone Unified System (BUS) is increasingly recognised as a strategic tool for improving operational efficiency in public institutions.

#### **Global Perspective**

Globally, governments have adopted integrated digital governance systems to enhance operational efficiency and service delivery. Countries such as Estonia, Singapore, and South Korea have implemented unified digital government platforms that integrate databases across ministries and agencies. These systems enable real-time data sharing, reduce duplication of tasks, minimise paperwork, and enhance coordination among departments.

United Nations Department of Economic and Social Affairs (2020) notes that integrated e-government systems significantly improve operational efficiency by automating processes, reducing human error, and enhancing accountability. Similarly, OECD (2019) highlights that digital backbone systems strengthen institutional performance through improved workflow management, faster transaction processing, and better monitoring of public resources.

Globally, the implementation of integrated systems has been associated with:

- Reduced service turnaround time
- Improved internal communication
- Enhanced data accuracy and security
- Lower operational costs
- Increased transparency and accountability

These outcomes demonstrate how digital backbone systems influence operational efficiency in public institutions.

### **Regional Perspective**

In Africa, many governments have embarked on digital transformation reforms aimed at modernising public administration and improving operational efficiency. Countries such as Rwanda and Kenya have introduced integrated government digital platforms to streamline service delivery and reduce bureaucratic inefficiencies.

For instance, Kenya's e-Citizen platform integrates multiple government services, enabling faster processing of licenses, permits, and registrations. These systems reduce manual paperwork, minimise corruption opportunities, and enhance service tracking mechanisms. According to regional ICT development reports, digital backbone systems in African public institutions have contributed to improved record management, revenue collection efficiency, and operational monitoring.

However, the region still faces challenges such as limited ICT infrastructure, resistance to change, skills gaps, and cybersecurity risks. Despite these constraints, integrated systems have

demonstrated measurable improvements in operational efficiency where implementation has been effectively managed.

### **Local Perspective**

In Zambia, digital transformation in public service is spearheaded by institutions such as the Smart Zambia Institute, which oversees the implementation of digital government systems including the Government Backbone Unified System (BUS). The BUS integrates various government departments to enhance data sharing, service coordination, and operational performance.

At the Road Transport and Safety Agency (RTSA) in Lusaka District, the implementation of BUS is expected to improve operational efficiency by:

- Reducing processing time for driver's licenses and vehicle registrations
- Enhancing real-time data verification
- Improving revenue collection accuracy
- Minimising duplication of records
- Strengthening internal communication between departments
- Increasing transparency and accountability

Before digital integration, many processes at RTSA were largely manual, leading to delays, data inconsistencies, and operational bottlenecks (John, 2023). The introduction of BUS aims to automate workflows, centralise databases, and improve service turnaround time.

Therefore, this study seeks to assess the extent to which the implementation of the Government Backbone Unified System (BUS) has improved operational efficiency at RTSA in Lusaka District by examining indicators such as service turnaround time, system reliability, cost efficiency, staff productivity, and customer satisfaction.

### **2.1.1 Challenges in the Implementation of the Government Backbone Unified System (BUS) and Mitigation Strategies: Global, Regional and Local Perspectives**

The implementation of integrated digital systems such as the Government Backbone Unified System (BUS) has become central to improving public sector efficiency. However, while digital transformation offers significant benefits, the process of implementation is often accompanied by numerous challenges. Understanding these challenges and the strategies used to address them is critical in evaluating the effectiveness of such reforms.

#### **Global Perspective**

Globally, governments have faced both technical and institutional challenges in implementing integrated e-government systems. Countries such as Estonia and Singapore are often cited as successful examples of digital governance; however, their transformation processes required substantial investments in ICT infrastructure, cybersecurity frameworks, and capacity building.

According to the World Bank (2016) and OECD (2019), common global challenges in implementing unified digital systems include high initial costs, system integration complexities, data privacy concerns, and resistance to organisational change. Public servants sometimes resist new systems due to fear of job displacement or unfamiliarity with digital tools. Additionally, cybersecurity threats pose significant risks, requiring governments to invest in secure digital architecture and continuous monitoring systems.

To address these challenges, governments globally have adopted strategies such as phased implementation approaches, continuous staff training, strong change management frameworks, public awareness campaigns, and the establishment of dedicated digital transformation agencies. Strong political will and leadership commitment have also been critical in ensuring successful implementation.

#### **Regional Perspective**

In the African context, the implementation of integrated government systems has faced additional structural and resource-based constraints. Countries such as Kenya and Rwanda have implemented digital government platforms; however, challenges such as unreliable internet connectivity, limited

ICT infrastructure, inadequate funding, and skills shortages have slowed progress in many public institutions.

The digital divide remains a major regional challenge, particularly in rural areas where access to internet services is limited. Furthermore, resistance to change among civil servants, limited technical expertise, and weak inter-agency coordination have hindered the smooth integration of digital backbone systems. Data security and system downtime have also been recurring concerns in some African public institutions (Gareth, 2024). To overcome these challenges, African governments have adopted strategies including public-private partnerships to strengthen ICT infrastructure, capacity-building programs for government staff, policy reforms to support digital governance, and the establishment of national ICT authorities to coordinate implementation efforts. Gradual system rollouts and pilot testing have also been used to minimise disruptions during implementation.

### **Local Perspective**

In Zambia, digital transformation initiatives are coordinated by the Smart Zambia Institute, which oversees the implementation of systems such as the Government Backbone Unified System (BUS). At the Road Transport and Safety Agency (RTSA) in Lusaka District, the implementation of BUS has likely encountered several operational and institutional challenges (Kabaso, 2020). These challenges may include system integration difficulties with existing RTSA databases, intermittent network connectivity, limited ICT infrastructure, staff resistance to new digital workflows, inadequate training, and concerns over system reliability and cybersecurity. Transitioning from manual or semi-digital systems to a fully integrated backbone system can also temporarily disrupt service delivery, leading to delays and public dissatisfaction during the adjustment period.

To address these challenges, RTSA may have implemented strategies such as staff training and capacity-building programs, technical support partnerships with Smart Zambia Institute, phased system rollouts, infrastructure upgrades, and continuous monitoring of system performance. Change management initiatives, including staff sensitisation and stakeholder engagement, are also critical in reducing resistance and improving system adoption. Therefore, this study seeks to identify the specific challenges faced by RTSA during the implementation of the Government Backbone Unified System (BUS) and examine the strategies employed to address these challenges

within the Lusaka District context (Honest, 2021). Understanding these issues will provide insight into the effectiveness and sustainability of digital transformation efforts within public sector institutions in Zambia.

### **2.1.2 Effects of the Government Backbone Unified System (BUS) on Customer Satisfaction: Global, Regional and Local Perspectives.**

Customer satisfaction in the public sector refers to the extent to which citizens' expectations regarding service quality, accessibility, reliability, responsiveness, and transparency are met by government institutions. With the rise of digital governance, integrated systems such as the Government Backbone Unified System (BUS) have increasingly been evaluated not only in terms of operational efficiency but also in terms of their impact on customer satisfaction.

#### **Global Perspective**

Globally, digital government platforms have significantly transformed how citizens interact with public institutions. Countries such as Estonia and Singapore have implemented unified digital systems that allow citizens to access multiple government services through single online portals. These platforms have improved convenience, reduced waiting times, enhanced transparency, and increased trust in public institutions.

According to the OECD (2019) and the World Bank (2016), integrated digital systems improve customer satisfaction by providing 24/7 service access, reducing physical visits to government offices, ensuring faster processing times, and minimising errors associated with manual systems. Real-time tracking of applications and automated notifications further enhance citizens' experiences by improving communication and predictability.

However, global experience also shows that customer satisfaction depends heavily on system reliability, ease of use, and digital literacy levels. Where systems experience frequent downtime, cybersecurity breaches, or complex user interfaces, public satisfaction tends to decline. Therefore, the design, stability, and responsiveness of digital systems are critical determinants of customer satisfaction outcomes.

## **Regional Perspective**

In Africa, digital transformation initiatives have increasingly focused on improving citizen experience and service accessibility. Countries such as Kenya through its e-Citizen platform and Rwanda through its Irembo portal have introduced unified digital platforms to enhance public service delivery.

Regionally, these systems have improved customer satisfaction by reducing long queues, increasing transparency in payments, and simplifying service procedures. Citizens are able to apply for licenses, permits, and registrations online, which reduces travel costs and waiting times. Digital payment systems also minimise opportunities for corruption, thereby increasing public trust and perceived service fairness (Mutembo, 2022).

Nevertheless, the regional context presents challenges such as limited internet access, low digital literacy in rural populations, and system downtimes. These factors sometimes limit the positive impact of digital systems on customer satisfaction. Therefore, governments in Africa have complemented digital reforms with public sensitisation campaigns, help desks, and hybrid service models that combine digital and physical support systems.

## **Local Perspective**

In Zambia, the Government Backbone Unified System (BUS) was introduced under the coordination of the Smart Zambia Institute as part of the national e-government agenda. At the Road Transport and Safety Agency (RTSA) in Lusaka District, BUS was implemented to automate services such as driver licensing, vehicle registration, and road safety inspections (Karen and Michale, 2023). Before the introduction of BUS, customers at RTSA experienced long queues, manual paperwork, slow processing times, and inconsistent service delivery. The BUS system was therefore expected to enhance customer satisfaction by:

- Reducing service turnaround time
- Improving accuracy of records
- Providing more transparent service processes
- Enabling better communication between RTSA and clients
- Minimising errors and duplication

If effectively implemented, the BUS system would likely increase customer satisfaction through faster service delivery, improved reliability, and greater transparency. However, challenges such as system downtimes, slow processing speeds, limited technical support, and low user familiarity with digital platforms may negatively affect customer perceptions. Therefore, this study endeavored to determine the actual effects of the BUS system on customer satisfaction at RTSA in Lusaka District by examining indicators such as waiting time, service reliability, ease of system use, complaint levels, and overall customer experience.

## **2.2 Empirical review**

### **2.2.1 Perspective on Efficiency of Integrated Government Digital Systems on Public Service Delivery**

Global perspectives on this study focus on how integrated government digital backbone systems affect efficiency and service delivery outcomes, including processing time, coordination, and citizen satisfaction.

Kattel and Mergel (2019) conducted a study in Estonia examining the impact of the X-Road digital backbone system on public service delivery efficiency. The study focused on interoperability across government agencies and its effect on administrative performance. Using administrative data and service performance reports, a mixed method approach with 120 sample size, the study found that X-Road enabled over 99% of public services to be delivered online, significantly reduced bureaucratic duplication, and shortened service processing times. The study concluded that a unified digital backbone substantially improves public service efficiency when supported by strong legal frameworks and institutional coordination.

OECD (2021) conducted a comparative study on Singapore's Smart Nation initiative, focusing on the integration of government services through platforms such as SingPass. Using a qualitative approach. The study assessed efficiency gains in public service delivery by measuring transaction times and citizen satisfaction levels. Findings revealed that integrated digital identity and shared government platforms reduced transaction completion times, minimized physical visits to service offices, and improved overall user satisfaction. The study concluded that centralized digital

systems enhance service delivery efficiency when embedded within robust governance and data protection frameworks.

Dunleavy, Margetts, Bastow, and Tinkler (2020) examined digital-era governance reforms across OECD countries using a qualitative approach, focusing on government-wide ICT platforms and their effect on operational efficiency. The study found that agencies using integrated digital backbones experienced improved inter-agency coordination, faster service delivery, and cost reductions. The conclusion emphasized that efficiency gains are most pronounced when digital systems are aligned with organizational reform and performance management structures.

### **2.2.2 Perspective on Efficiency of Centralized E-Government Platforms in Public Service Delivery**

#### **Global perspective**

Centralized digital government platforms have been widely recognized as key drivers of operational efficiency in public administration. In developed countries, integrated e-government systems consolidate multiple services into unified platforms, reducing duplication, minimizing paperwork, and improving workflow coordination. These systems enhance efficiency by shortening processing times, lowering transaction costs, and enabling real-time data sharing across government departments. However, global studies also show that the effectiveness of centralized platforms depends heavily on infrastructure readiness, cybersecurity frameworks, digital literacy, and institutional capacity (Hugo, 2022). Where these supporting structures are strong, digital platforms significantly improve operational efficiency; where they are weak, the gains are limited. Thus, while centralized systems have the potential to transform public sector efficiency, their success depends on contextual readiness and sustained institutional support.

## **Regional perspective,**

Scholars have examined how centralized digital government platforms influence service delivery efficiency within developing country contexts characterized by infrastructure gaps and capacity constraints. Sambuli (2019), in a qualitative study on Kenya's e-Citizen platform, examined service access time, transaction costs, and user convenience. The findings revealed that consolidating services such as business registration and driver licensing onto a single digital platform significantly reduced processing time and eliminated the need for multiple physical visits to government offices. The study concluded that centralized platforms can greatly enhance operational efficiency, particularly when supported by digital payment systems such as mobile money. Similarly, Twizeyimana and Andersson (2019) studied Rwanda's Irembo e-government platform and found that it improved service turnaround times, strengthened tracking mechanisms, and enhanced accountability. However, they noted that challenges related to digital literacy and rural internet access constrained the full realization of efficiency gains. Mutula and Mostert (2018), in a multi-country Southern African study, further observed that although integrated systems were adopted to improve efficiency, gains were often undermined by system downtime, limited staff technical skills, and resistance to organizational change. Collectively, these regional studies suggest that while centralized digital platforms have strong potential to improve operational efficiency in Africa, infrastructure limitations, human capacity gaps, and institutional readiness significantly influence the extent of improvement.

## **Local perspective**

The implementation of centralized digital systems such as the Government Backbone Unified System (BUS) follows similar reform patterns observed regionally. The system, coordinated by the Smart Zambia Institute, was designed to integrate government services and improve coordination and efficiency across institutions. At the Road Transport and Safety Agency (RTSA) in Lusaka District, BUS was introduced to streamline operations such as vehicle registration and driver licensing. Consistent with regional findings, the extent to which BUS improves operational efficiency depends on factors such as system reliability, staff capacity, infrastructure stability, and user adoption. While integration of services has the potential to reduce processing times, eliminate redundant procedures, and enhance workflow coordination, challenges such as system downtimes,

limited technical expertise, and transitional resistance may constrain efficiency gains. Therefore, assessing the extent of improvement in operational efficiency at RTSA requires careful examination of both the benefits realized and the operational constraints experienced during implementation.

### **2.2.3 Perspective on Efficiency of the Government Backbone Unified System (BUS) on Public Service Delivery**

#### **Global perspective,**

Integrated digital government platforms have been widely adopted to enhance efficiency in public service delivery. Governments in countries such as Estonia and Singapore have implemented centralized digital backbone systems that integrate multiple public services into unified platforms. These systems have improved efficiency by reducing service turnaround times, minimizing duplication of records, enhancing inter-agency coordination, and enabling real-time data sharing (Merlin, 2020). Global studies emphasize that efficiency gains are reflected in faster transaction processing, reduced administrative costs, improved workflow automation, and enhanced transparency. However, global experience also demonstrates that the efficiency of digital backbone systems depends on strong ICT infrastructure, cybersecurity safeguards, institutional capacity, and continuous performance monitoring. Where these supporting factors are present, digital systems significantly improve public service delivery efficiency; where they are weak, efficiency gains remain limited.

#### **Regional perspective,**

Centralized digital government systems have increasingly been adopted to improve public service efficiency, although their performance has been shaped by infrastructure and capacity constraints. Countries such as Kenya and Rwanda have implemented unified e-government platforms aimed at reducing bureaucratic inefficiencies and improving service accessibility. Empirical studies in the region show that integrated platforms reduce physical visits to government offices, shorten processing time, and enhance transparency in revenue collection. However, regional research also highlights challenges such as unreliable internet connectivity, limited technical skills among public

servants, system downtimes, and digital literacy gaps among citizens (Twizeyimana and Andersson, 2019). These factors often constrain the full efficiency potential of centralized systems. Consequently, while digital backbone systems in Africa demonstrate measurable improvements in service delivery efficiency, their impact varies depending on infrastructure readiness, human capacity development, and institutional support mechanisms.

### **Local perspective in Zambia,**

The Government Backbone Unified System (BUS), coordinated by the Smart Zambia Institute, was introduced to integrate government services and enhance efficiency across public institutions. Within service-oriented agencies such as the Road Transport and Safety Agency (RTSA), BUS was expected to improve public service delivery through better queue management, enhanced data sharing, and streamlined processing of services such as driver licensing and vehicle registration. The Smart Zambia Institute (2019) conducted an implementation assessment and reported preliminary improvements in service coordination and data integration among pilot institutions, including RTSA. However, the assessment was largely descriptive and did not rigorously measure specific efficiency indicators such as transaction processing time or cost reduction.

Similarly, Nkhuwa (2021) examined ICT-driven reforms in Zambia's transport sector and found that although the BUS supported modernization objectives, gaps in staff training and system utilization limited measurable efficiency outcomes. Nkandu (2022) further identified challenges such as system downtime, limited technical skills, and resistance to change in Zambian public institutions. However, these studies did not provide agency-specific empirical measurements of efficiency outcomes at RTSA. Collectively, local literature indicates that while the BUS represents a significant step toward digital transformation and improved service delivery, there remains limited empirical evidence assessing its actual efficiency impact using measurable performance indicators.

### **Identified Research Gap**

The reviewed literature demonstrates that while global and regional studies provide strong evidence that integrated digital backbone systems can improve public service delivery efficiency, the Zambian context lacks detailed, empirical, agency-level assessments. Specifically, there is insufficient evidence on how the Government Backbone Unified System has affected operational efficiency, service turnaround time, staff productivity, and citizen satisfaction at RTSA in Lusaka District. This study addresses this gap by conducting a focused case study to assess the actual efficiency effects of the BUS on public service delivery at RTSA.

## **2.3 Theoretical framework**

This study was guided by two key theories: Public Choice Theory, New Public Management (NPM) Theory and Technology Acceptance Model.

### **2.3 Theoretical Framework**

#### **2.3.1 Public Choice Theory**

Public Choice Theory, advanced by Buchanan and Tullock (1962), emphasizes the role of individual preferences and rational decision-making in shaping public sector behavior. The theory posits that the efficiency of public service delivery is influenced by the actions and motivations of both citizens and public officials. Citizens are viewed as rational actors who demand efficient, transparent, and cost-effective services, while public officials may pursue personal or institutional interests that do not always align with broader public objectives (Mueller, 2003).

In the context of this study, Public Choice Theory helps explain how the outcomes of the Government Backbone Unified System (BUS) are shaped by the behavior of two key actors: citizens, who interact with BUS-enabled services and evaluate them based on convenience and efficiency; and government officials, who implement, operate, and maintain the system. The theory provides insight into how incentives, resistance to change, and user expectations can influence the effectiveness of BUS in improving public service delivery at RTSA.

#### **2.3.2 New Public Management (NPM) Theory**

New Public Management (NPM), popularized by Hood (1991), advocates the adoption of private-sector management practices within public administration to improve efficiency, accountability, and service quality. The theory emphasizes results-oriented management, performance measurement, decentralization, and a strong customer-focused approach, where citizens are treated as service clients rather than passive recipients. NPM aligns closely with digital transformation initiatives, as the use of ICT systems such as the Government Backbone Unified System is intended to streamline processes, reduce bureaucratic inefficiencies, and improve responsiveness in service delivery. Within the Zambian public sector context, NPM highlights efficiency, service turnaround time, staff productivity, and customer satisfaction as key indicators for evaluating the effectiveness of digital government reforms (Pollitt & Bouckaert, 2017; Dunleavy et al., 2006). The theory therefore offers a useful lens for assessing whether BUS has achieved its intended performance and service delivery outcomes at RTSA.

### **2.3.3 Technology Acceptance Model (TAM)**

The Technology Acceptance Model (TAM), developed by Davis (1989), explains how users come to accept and use new information systems. The model posits that two key factors perceived usefulness and perceived ease of use significantly influence users' attitudes toward a system and their actual usage behavior. TAM has been widely applied in studies evaluating ICT adoption and performance in both private and public sector environments. In the context of the Government Backbone Unified System, TAM is relevant in understanding how RTSA staff and citizens perceive the system's usefulness in improving service efficiency and whether the system is easy to use. User acceptance is critical because even well-designed digital systems may fail to deliver efficiency gains if they are poorly understood, underutilized, or resisted by users. TAM therefore helps explain the human–technology interaction dimension that affects the effectiveness of BUS implementation.

### **Adopted Theory for the Study**

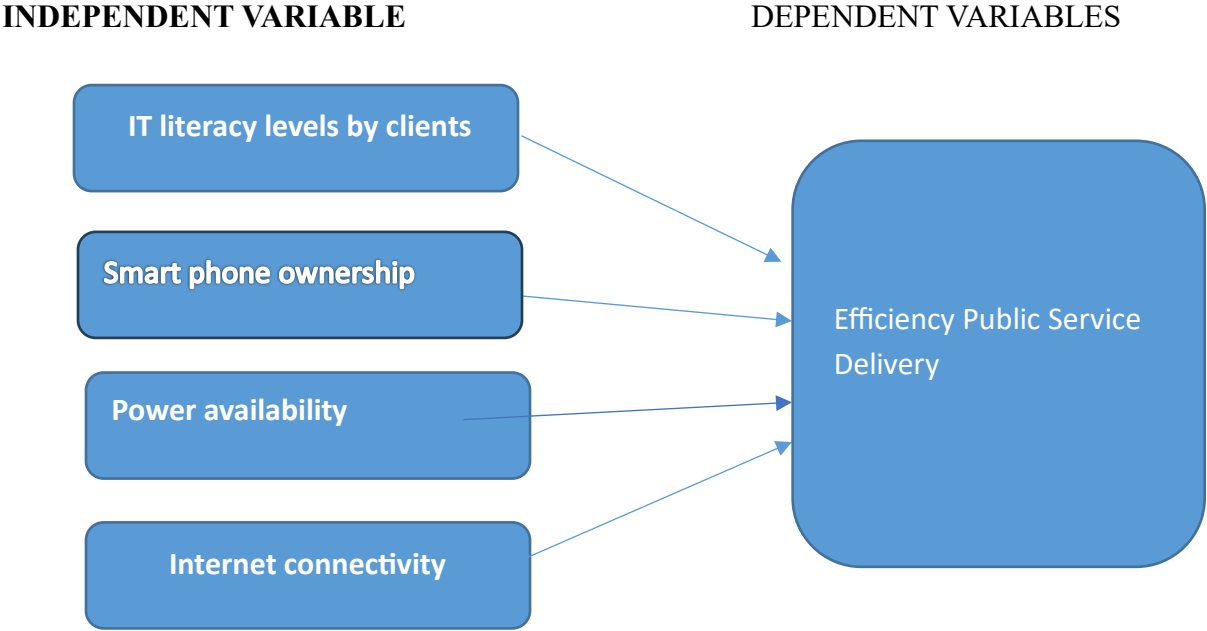
New Public Management (NPM) theory is adopted as the main theoretical foundation for this study. This is because the primary focus of the study is to assess the efficiency of the Government Backbone Unified System on public service delivery at RTSA, using indicators such as operational

efficiency, service quality, staff productivity, and customer satisfaction. NPM directly emphasizes these performance-based outcomes and aligns closely with the objectives of digital government reforms aimed at improving efficiency and accountability in public institutions. While Public Choice Theory and TAM support the understanding of user behavior and acceptance, NPM provides the most comprehensive framework for evaluating whether BUS has delivered measurable improvements in public service delivery performance.

### 2.4 Conceptual framework

The conceptual framework below illustrates the relationship between the key variables under investigation, informed by the theoretical lenses.

*Figure 1: Conceptual Framework showing the relationship between independent variables and the dependent variable.*



(Source: Author, 2025)

### 2.5 Relationship of the independent variables and dependent variable

#### IT Literacy Levels by Clients

IT literacy levels among clients refers to the ability of citizens to effectively use digital technologies such as computers, smartphones, and online platforms to access public services. In the context of the Government Backbone Unified System (BUS), high IT literacy enables users to confidently navigate the system, complete transactions online, interpret digital interfaces, and resolve basic technical challenges without excessive support. When clients lack sufficient digital skills, they may experience frustration, make errors, or avoid using online services altogether, undermining the intended efficiency gains of digital service delivery platforms (Rana & Dwivedi, 2021). Therefore, IT literacy directly affects the extent to which citizens can benefit from BUS, determine their satisfaction with service interactions, and influence overall perceptions of system effectiveness.

### **Smartphone Ownership**

Smartphone ownership represents the extent to which citizens have access to mobile devices capable of connecting to digital government services. As many e-government platforms are optimized for mobile access or require mobile apps, widespread smartphone ownership increases the likelihood that citizens can conveniently access services anytime and anywhere. In environments where smartphone penetration is high, citizens are more likely to engage with digital public services, reducing reliance on physical visits to agency offices and lowering service turnaround times (Rout, Dwivedi & Rana, 2022). Conversely, limited access to smartphones can create digital exclusion, with certain population groups disproportionately unable to benefit from BUS functionalities thereby affecting measured efficiency and citizen satisfaction.

### **Power Availability**

Power availability refers to the reliability and consistency of electricity supply, which is a critical enabling condition for digital service delivery. The smooth functioning of online systems such as the BUS depends on uninterrupted power for servers, client terminals, and user access points. Frequent power outages disrupt service operations, hinder client access, increase system downtime, and can force users to resort to offline alternatives, negating the efficiency advantages of digital platforms (Ojokoh & Adeyinka, 2023). In contexts where power supply is inconsistent,

public institutions may incur additional costs for backup solutions, further complicating efforts to achieve optimal efficiency outcomes.

### **Internet Connectivity**

Internet connectivity refers to the availability, speed, stability, and affordability of internet access for both public institutions and citizens. For digital platforms like the BUS to function effectively, users and servers must maintain reliable network connections; slow or unstable internet can cause delays, failed transactions, and system unresponsiveness. Robust connectivity facilitates real-time data exchange, faster service processing, and seamless interaction between clients and the BUS interface (Macharia, 2023). Poor connectivity often disproportionately affects rural or underserved urban populations, introducing equity concerns and limiting the overall efficiency impact of e-government initiatives.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter outlines the research approach, research design, study population, sample size, sampling techniques, data collection instruments, data analysis procedures, validity and reliability considerations, and ethical issues that guided the study.

#### **3.2 Research Approach**

The study adopted a qualitative research approach to gain an in-depth understanding of how the Government Backbone Unified System has influenced public service delivery at RTSA. A qualitative approach was considered appropriate because it enables the exploration of meanings, perceptions, and lived experiences of participants within their natural organizational and social contexts (Creswell & Poth, 2023). Through qualitative inquiry, the study was able to capture nuanced insights into system efficiency, implementation challenges, and user experiences that could not be adequately quantified. This approach aligns with public sector research where understanding institutional behavior, service processes, and stakeholder perspectives is essential for evaluating reforms and digital governance initiatives (Saunders, Lewis & Thornhill, 2023).

#### **3.3 Research Design**

The study employed a descriptive qualitative research design to examine the effects of the Government BUS on RTSA's public service delivery. Descriptive qualitative design is suitable for studies that seek to provide a detailed account of phenomena as experienced by participants, without manipulating variables (Bell, Bryman & Harley, 2022). The design allowed the researcher to document how the BUS system operates in practice and how it has altered service delivery processes, efficiency, and stakeholder interactions at RTSA.

In addition, the study adopted a cross-sectional design, whereby data were collected at a single point in time. This design was appropriate because it enabled the capture of current experiences and perceptions of employees, customers, and stakeholders regarding the BUS system after its

implementation. Cross-sectional qualitative designs are widely applied in public administration research to assess policy and system outcomes within defined institutional settings (Bryman, 2021).

### **3.4 Study Population**

The study population comprised RTSA employees, RTSA customers, and key stakeholders who were directly involved in or affected by the implementation of the Government Backbone Unified System in Lusaka District. These groups were selected because they interact with the BUS system at different operational and strategic levels, making them well positioned to provide comprehensive insights into its effects on public service delivery (Mertens, 2022).

RTSA employees included staff engaged in customer service delivery, vehicle registration, licensing, and related administrative functions. Their inclusion enabled the study to capture internal operational experiences, workflow efficiency, system usability, and institutional challenges encountered during BUS implementation. RTSA customers formed another important segment of the population and consisted of individuals accessing services such as vehicle registration and licensing. Their perspectives were essential for assessing service accessibility, waiting times, satisfaction levels, and perceived improvements or shortcomings of the BUS system from the user's standpoint. Key stakeholders included RTSA management officials, policymakers, and government personnel involved in the planning, implementation, and oversight of the BUS system. These stakeholders provided strategic and policy-level insights into system objectives, governance arrangements, and institutional constraints influencing service delivery outcomes (Etikan & Bala, 2022).

According to RTSA administrative records, the total population relevant to this study was approximately 3,675 individuals, comprising about 150 RTSA employees, approximately 3,500 customers interacting with RTSA services annually in Lusaka District, and 25 key stakeholders involved in system oversight (RTSA, 2024). Defining the population in this manner ensured adequate representation of operational, user, and governance perspectives.

### **3.5 Sample Size**

The study adopted a sample size of 100 respondents, drawn from RTSA employees, RTSA customers, and key stakeholders who were directly involved in or affected by the implementation of the Government Backbone Unified System in Lusaka District. Of the total sample, 35 respondents were RTSA employees, selected from departments involved in service delivery such as licensing, vehicle registration, and customer service; 45 respondents were RTSA customers who had recently accessed RTSA services and were therefore able to provide informed feedback on service efficiency and user experience; and 20 respondents were key stakeholders, including RTSA management staff and government officials involved in the planning, implementation, and oversight of the BUS system. This distribution ensured balanced representation of operational, user, and strategic perspectives, allowing the study to capture both internal institutional experiences and external service user perceptions.

The justification for the sample size was guided by the principle of data saturation, which emphasizes the adequacy of information rather than statistical representativeness. In qualitative and mixed public sector studies, saturation is reached when additional data no longer yield new themes or insights (Bunce & Johnson, 2020). With 100 respondents distributed across the three key participant categories, the study allowed sufficient depth within each subgroup while enabling triangulation of findings across different perspectives. The relatively larger customer sample enhanced the reliability of user experience data, while the inclusion of employees and stakeholders ensured rich institutional and policy-level insights. Consequently, the selected sample size was considered adequate to achieve thematic saturation and provide credible, comprehensive evidence on the effects of the Government Backbone Unified System on public service delivery at RTSA (Creswell & Poth, 2023). The chosen sample size enabled the researcher to conduct thorough interviews and collect meaningful narratives while remaining manageable within time and resource constraints.

### **3.6 Sampling Techniques**

The study employed purposive sampling to select participants who possessed relevant knowledge and experience regarding the BUS system and its influence on public service delivery at RTSA.

Purposive sampling is appropriate in qualitative research where participants are deliberately selected based on their ability to provide rich and relevant information aligned with the study objectives (Saunders et al., 2023).

RTSA employees were purposively selected based on their direct involvement in service delivery processes affected by the BUS system. Customers were selected based on their recent interaction with RTSA services, ensuring that their experiences reflected current system operations. Key stakeholders were selected based on their roles in policy formulation, system management, and oversight. This sampling technique ensured balanced representation of operational, user, and strategic perspectives, thereby enhancing the credibility and comprehensiveness of the findings (Mertens, 2022).

### **3.7 Data Collection / Instruments**

Primary data for the study were collected using semi-structured interviews and structured questionnaires with open-ended components. Semi-structured interviews were conducted with RTSA employees and key stakeholders to elicit detailed narratives on system implementation, operational efficiency, institutional challenges, and governance issues. An interview guide was used to ensure consistency across interviews while allowing flexibility to probe emerging issues and clarify responses. Interviews lasted between 30 and 45 minutes and were conducted either in person at RTSA offices or through secure virtual platforms. With participants' consent, interviews were audio-recorded and later transcribed verbatim.

Structured questionnaires with open-ended sections were administered to RTSA customers to capture both measurable perceptions of service efficiency and qualitative feedback on user experiences. The combination of interviews and questionnaires enabled data triangulation, thereby strengthening the credibility of the findings through the corroboration of evidence from multiple sources (Creswell & Poth, 2023).

### **3.8 Data Analysis**

Data analysis was conducted using thematic analysis, which involves systematically coding qualitative data to identify patterns, themes, and relationships within the dataset. The analysis

followed a structured process of familiarization with the data, initial coding, theme development, and interpretation. This approach enabled the researcher to examine recurring issues related to service efficiency, system challenges, user satisfaction, and institutional capacity associated with the BUS system. Thematic analysis is widely recognized as a robust method for analyzing qualitative data in public sector and policy research (Braun & Clarke, 2022).

### **3.9 Validity and Reliability**

Validity and reliability in qualitative research were addressed through strategies aimed at ensuring trustworthiness, credibility, and consistency of the findings. To enhance reliability, a pilot interview was conducted with a small number of participants to assess the clarity, relevance, and consistency of the data collection instruments. Feedback from the pilot informed refinements to the interview guide and questionnaire, reducing ambiguity and improving data quality.

Validity was strengthened through triangulation of data sources, involving employees, customers, and stakeholders, which allowed the comparison and verification of findings across different perspectives. In addition, the use of established theoretical frameworks, including Public Choice Theory and New Public Management Theory, provided a coherent analytical lens for interpreting the findings. Expert review by practitioners and scholars in public administration further enhanced the credibility and appropriateness of the research instruments (Lincoln & Guba, 2021).

### **3.10 Ethical Considerations**

Ethical considerations were integral to the conduct of this study and were observed throughout the research process. Prior to data collection, participants were fully informed about the purpose of the study, its objectives, and the nature of their involvement. Informed consent was obtained from all participants, ensuring that they clearly understood their rights and responsibilities before agreeing to participate (Israel & Hay, 2022).

Voluntary participation was strictly upheld, and participants were informed that their involvement was entirely optional and that they could withdraw from the study at any stage without any negative consequences. No monetary or material incentives were offered, thereby minimizing undue

influence or coercion. This approach aligns with ethical standards for social research that emphasize autonomy and respect for participants (Saunders et al., 2023).

Confidentiality and anonymity were also ensured by removing personal identifiers from transcripts and reports. Data were securely stored and accessed only by the researcher, and findings were reported in a manner that prevented the identification of individual participants or specific offices. Participants were treated with dignity and respect throughout the research process, and the study adhered to accepted ethical principles governing research involving human subjects (Creswell & Poth, 2023).

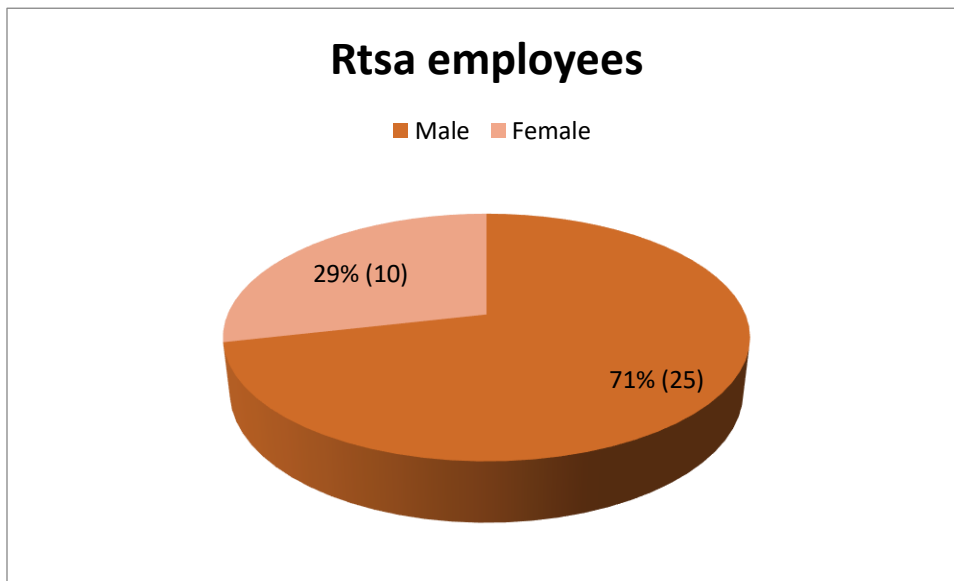
**CHAPTER FOUR**  
**DATA PRESENTATION, ANALYSIS AND DISCUSSION**

**4.0 Introduction**

This chapter presents the analysis of the findings in line with the research objectives and the analysis of the data collected from questionnaires. This involved an Assessment of the Efficiency of the Government Backbone Unified System on Public Service Delivery: Case Study of RTSA, Lusaka.

**4.1 Demographics**

**Fig 4.1.1 Gender of Road Transport and Safety employees**



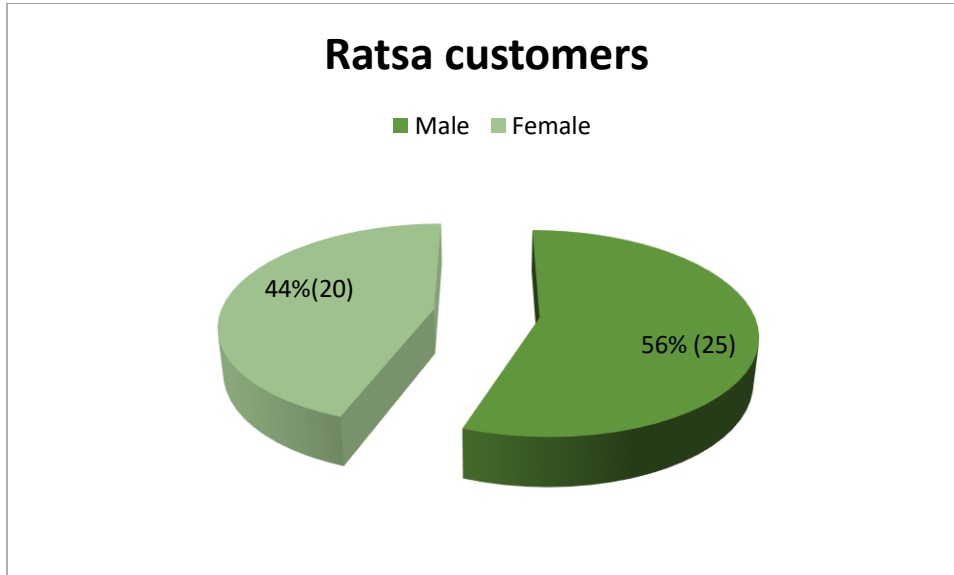
**Source: Researcher,2025**

Based on Fig 4.1.1 the study involved 35 Road Transport and Safety Agency (RTSA) employee respondents, comprising 25 males and 10 females. This gender distribution reflects the existing workforce composition within operational and technical departments at RTSA, particularly in

areas directly involved in the implementation and use of the Government Backbone Unified System (BUS), such as licensing, vehicle registration, ICT, and customer service. The higher proportion of male respondents can be attributed to the nature of RTSA's core operational functions, which traditionally have a higher male representation, especially in technical, enforcement, and systems-related roles. Conversely, female respondents were mainly drawn from customer service, administration, and selected licensing roles, where they are actively engaged in service delivery and interaction with the BUS platform.

From an analytical perspective, the inclusion of both male and female respondents ensured that the study captured diverse experiential perspectives on the efficiency of the BUS system. Both groups reported similar observations regarding improvements in transaction speed, data accuracy, and interdepartmental coordination following the implementation of BUS. This suggests that perceptions of system efficiency were not significantly influenced by gender, but rather by the functionality and reliability of the system itself.

**Fig 4.1.2 Gender of Road Transport and Safety customers**

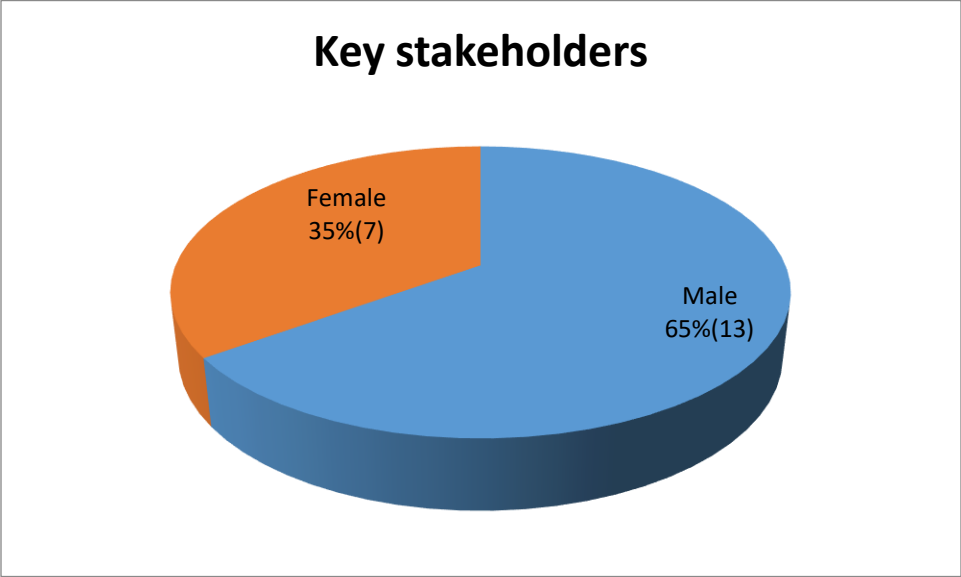


**Source: Researcher,2025**

According to Fig 4.1.2 Out of the 45 RTSA customers who participated in the study, 25 respondents were male while 20 respondents were female. This distribution reflects a relatively balanced representation of service users who interacted with RTSA services under the Government Backbone Unified System (BUS). The inclusion of both male and female respondents ensured that perceptions of service efficiency, accessibility, and user experience were captured across gender lines. The slightly higher number of male respondents can be attributed to the nature of RTSA services, such as vehicle registration and licensing, which traditionally record higher male participation. However, the substantial participation of female respondents indicates increasing female engagement with road transport services, underscoring the relevance of BUS in serving a diverse customer base.

From an analytical perspective, both male and female respondents reported similar experiences regarding service efficiency under the BUS system. Improvements in transaction speed, clarity of procedures, and reduced errors were consistently highlighted across genders, suggesting that the BUS system delivers services equitably without gender-based disparities. This implies that the efficiency gains introduced by BUS are broadly experienced by all customers, regardless of gender

**Fig 4.1.3 Key stakeholders of Road Transport and Safety Agency**

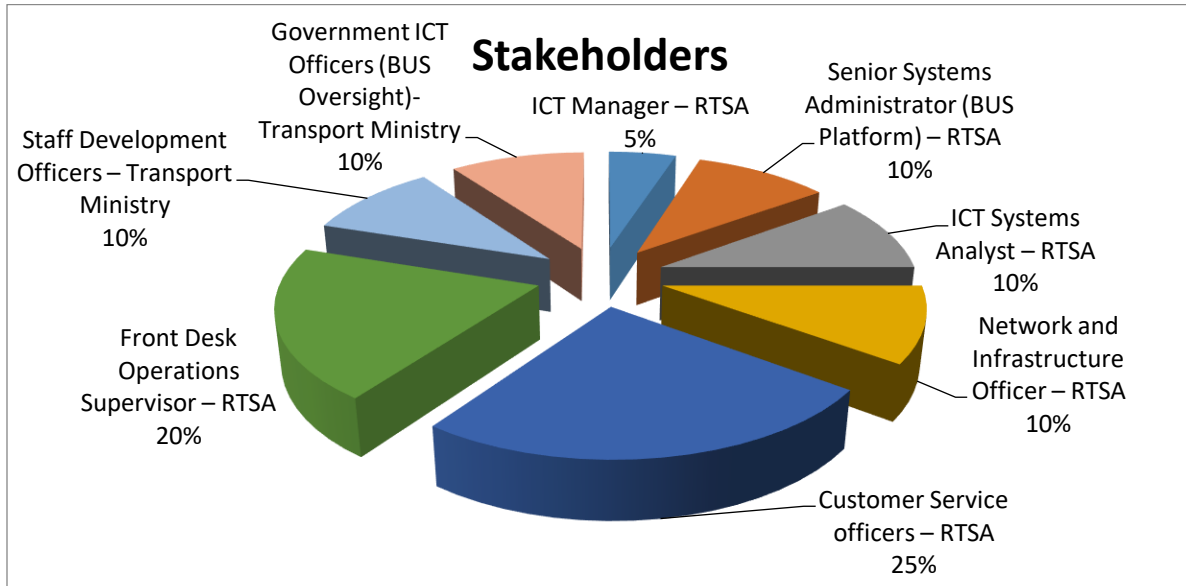


Source: Researcher,2025

Fig 4.1.3 reveals that the study engaged 20 key stakeholders from the Road Transport and Safety Agency (RTSA), Lusaka, who were directly involved in the planning, implementation, and oversight of the Government Backbone Unified System (BUS). Of the total number of key stakeholder respondents, 7 were female and 13 were male, reflecting a gender distribution of 35% female and 65% male participation. This gender composition mirrors the prevailing gender structure within technical, managerial, and policy-oriented roles in public sector institutions such as RTSA, where male representation remains relatively higher, particularly in ICT, operations, and systems management positions. Despite the numerical imbalance, the inclusion of both male and female stakeholders ensured that diverse perspectives were captured, especially regarding system usability, operational efficiency, and customer service delivery.

Female stakeholders provided valuable insights particularly in areas related to service delivery coordination, customer engagement, and staff capacity development, while male stakeholders contributed significantly to discussions on technical implementation, system integration, and policy oversight. This balanced representation across functional roles enhanced the depth and reliability of the findings.

**Fig 4.1.4 Types Key stakeholders of Road Transport and Safety Agency**



**Source: Researcher,2025**

According to Fig 4.1.4. The study involved a diverse group of key stakeholders drawn from the Road Transport and Safety Agency (RTSA) and the Transport Ministry, selected based on their direct involvement in the implementation, operation, and oversight of the Government Backbone Unified System (BUS). The distribution of stakeholder types reflects the multidisciplinary nature of BUS implementation, encompassing technical, operational, customer-facing, and policy oversight roles.

The largest proportion of stakeholders comprised Customer Service Officers from RTSA (25%). These respondents were directly involved in day-to-day service delivery and provided critical insights into how BUS influenced transaction speed, customer interaction, and service efficiency at the operational level. Their perspectives were essential in assessing the system’s impact on frontline public service delivery.

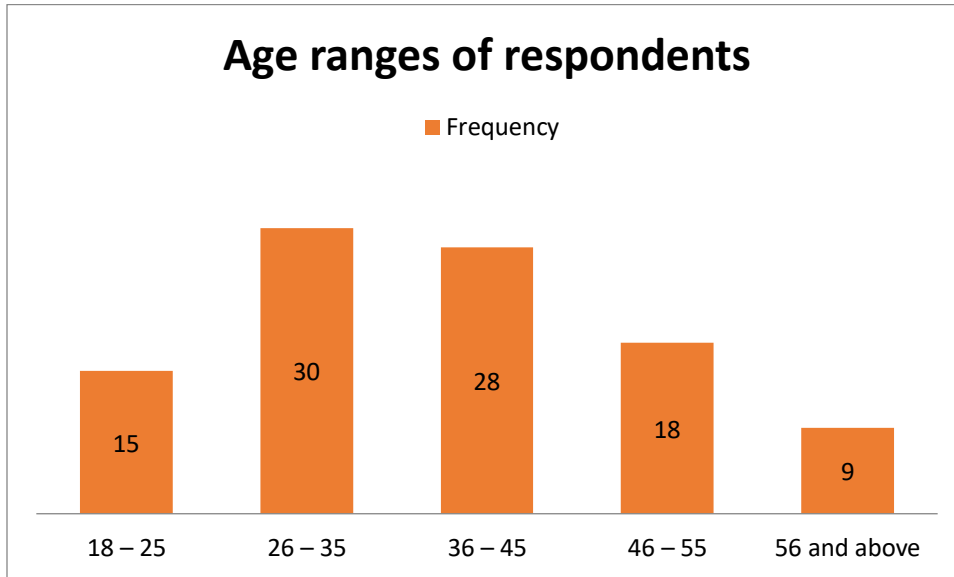
Front Desk Operations Supervisors from RTSA accounted for 20% of the stakeholders. These individuals played a supervisory role in coordinating service counters and managing workflow, enabling them to assess how BUS affected queue management, coordination of services, and overall service flow within RTSA offices.

Technical expertise was represented through several stakeholder categories. ICT Systems Analysts (10%), Senior Systems Administrators for the BUS platform (10%), and Network and Infrastructure Officers (10%) from RTSA contributed insights into system functionality, data integration, system stability, and infrastructure reliability. Their participation strengthened the assessment of BUS efficiency from a systems performance and technological readiness perspective.

From a strategic and coordination standpoint, Government ICT Officers responsible for BUS oversight from the Transport Ministry constituted 10% of the stakeholders. These respondents provided policy-level insights into system governance, inter-agency integration, and alignment of BUS with national digital transformation objectives. In addition, Staff Development Officers from the Transport Ministry (10%) contributed perspectives on capacity building, training, and change management associated with BUS implementation.

Finally, the ICT Manager at RTSA (5%) represented senior technical leadership, offering a holistic view of system management, resource allocation, and long-term sustainability of the BUS platform.

**Fig 4.1.5 Age ranges for all respondents engaged in the study**



**Source: Researcher,2025**

Fig 4.1.5 reveals that the age distribution of respondents indicates a fairly balanced representation across different age groups, with a strong concentration in the economically active population. Respondents aged 26-35 years constituted the largest proportion of the sample, accounting for 30% (30) of the total respondents. This suggests that a significant number of participants were young adults who are actively engaged in employment and service utilization, making them well-positioned to provide informed perspectives on the implementation and use of the Government Backbone Unified System (BUS) at RTSA.

Closely following this group were respondents aged 36-45 years, who represented 28% (28) of the sample. This age category largely comprises experienced professionals and long-serving staff, whose insights are valuable in assessing changes in operational efficiency, service delivery, and organizational processes before and after BUS implementation. The strong representation of this group enhances the credibility of the findings, particularly regarding strategic and operational impacts.

Respondents within the 46-55 years age range accounted for 18% (18) of the total sample. This group is likely to include senior staff, managers, and policy influencers with substantial institutional knowledge. Their participation provided strategic and managerial perspectives on

system implementation, challenges encountered, and long-term policy implications of BUS within RTSA. Younger respondents aged 18-25 years made up 15% (15) of the sample. This group primarily represents newer employees and younger service users who are generally more familiar with digital technologies. Their inclusion was important in capturing user experiences related to system usability, accessibility, and responsiveness of BUS-enabled services.

Lastly, respondents aged 56 years and above constituted 9% (9) of the sample. Although this was the smallest group, their views were critical in reflecting long-term institutional memory and assessing adaptability to digital transformation initiatives within the public sector. In a nutshell, the age distribution demonstrates that 58% of respondents were between 26 and 45 years, indicating that the findings are largely informed by respondents who are both professionally active and technologically engaged. At the same time, the inclusion of older age groups ensures diverse perspectives, strengthening the comprehensiveness and reliability of the study's conclusions.

## **4.2: Operational Efficiency**

### **4.2.1: Pre-BUS Operational Environment**

Before the implementation of the Government Backbone Unified System (BUS), service delivery at the Road Transport and Safety Agency (RTSA) was largely manual, fragmented, and bureaucratic, a situation consistently highlighted by respondents across departments. RTSA employees explained that most processes relied on paper-based records, physical files, and manual verification procedures, with limited use of integrated digital systems. Departments operated in relative isolation, requiring documents to be physically transferred from one office to another for approvals and validation. This lack of system integration created bottlenecks, especially when key officers were unavailable or when files were misplaced.

Respondents further indicated that the presence of multiple approval points significantly slowed down service delivery. Each stage of the process depended on manual endorsements, which often resulted in delays and backlogs. RTSA staff noted that a single missing document or error in a file could halt the entire transaction, forcing customers to return on another day.

Verbatim

“Before BUS, everything was manual. A client’s file had to move physically from one office to another, and if one officer was not available, the process would stop.”-Respondent 22

In addition, respondents reported that the heavy reliance on physical documentation increased the risk of misfiling, duplication, and loss of records, which negatively affected data accuracy and institutional accountability. Some RTSA employees noted that retrieving historical records was particularly challenging, as files were stored in different locations and were not easily traceable. This often resulted in disputes, repeated data entry, and unnecessary delays in resolving customer queries.

RTSA respondents also emphasized that the manual system placed a significant burden on both staff and customers. Staff productivity was reduced due to repetitive administrative tasks, while customers were subjected to long queues, extended waiting times, and multiple visits to complete a single service such as license renewal or vehicle registration. One respondent remarked that customers frequently expressed frustration over the slow pace and unpredictability of service delivery.

RTSA respondents agreed that the pre-BUS system constrained institutional efficiency and limited RTSA’s capacity to respond promptly to public service demands. The inefficiencies inherent in the manual system undermined customer satisfaction and eroded public confidence in RTSA’s service delivery processes. These challenges provided a strong justification for the adoption of the Government Backbone Unified System as a strategic intervention aimed at improving efficiency, transparency, and responsiveness in public service delivery.

#### **4.2.2 Workflow Transformation After BUS Introduction**

The introduction of the Government Backbone Unified System (BUS) marked a fundamental transformation in RTSA’s operational processes, shifting service delivery from fragmented manual procedures to digitally integrated and automated workflows. RTSA respondents consistently reported that daily work routines became more structured, standardized, and predictable, enabling

staff to manage transactions more efficiently and with greater confidence. Unlike the pre-BUS environment, where employees depended on physical files and informal follow-ups, BUS introduced a centralized platform that streamlined the entire service delivery chain.

RTSA employees explained that the system allowed real-time access to client data across departments, eliminating the need for physical file movement and repeated data entry. Once a client's information was entered into the system, it became instantly available to licensing, vehicle registration, and customer service units. This integration significantly reduced delays caused by inter-departmental dependencies and improved continuity in service delivery.

Verbatim:

“Now, once a client is captured in the system, any department can access the information. This has reduced unnecessary movements and delays.” -Respondent 12

Further, respondents noted that BUS enhanced process tracking and accountability, as each transaction could be monitored from initiation to completion. Employees reported that they could easily identify the status of a client's application, reducing uncertainty and minimizing the need for manual follow-ups. This visibility improved coordination among staff and reduced instances of duplicated effort.

Several RTSA respondents also highlighted that the system simplified workload management by automating routine tasks, such as verification and record updating. This allowed staff to focus more on service quality rather than administrative paperwork. As one respondent explained, the system “guides you on what to do next,” reducing confusion and errors during service processing.

RTSA respondents agreed that the integration brought about by BUS significantly reduced administrative bottlenecks, enhanced internal coordination, and improved staff productivity. The shift toward digital integration not only increased organizational efficiency but also laid a foundation for faster, more reliable, and transparent public service delivery at RTSA. These findings demonstrate that BUS played a critical role in modernizing RTSA's operational environment and improving its capacity to meet citizen service demands efficiently.

### **4.2.3 Speed and Timeliness of Service Delivery**

A dominant finding emerging from the analysis was the significant reduction in service processing time following the implementation of the Government Backbone Unified System (BUS). RTSA respondents consistently reported that key services such as driver's license issuance, vehicle registration, renewals, and road tax processing were now completed much faster than during the pre-BUS period. Employees attributed this improvement largely to the automation of verification processes, centralized data access, and the reduction of multiple manual approval stages.

Respondents explained that under the previous manual system, service processing often extended over several days due to delays in file movement, verification, and approvals. With the introduction of BUS, many of these steps were either automated or executed simultaneously within the system, significantly shortening turnaround times.

Verbatim:

“What used to take two or three days can now be done in one day. The system really improved speed.”-Respondent 13

Further insights from respondents indicated that BUS enabled faster identity verification, instant retrieval of client records, and real-time confirmation of transactions. This reduced the need for repeated customer visits and minimized idle waiting periods within service queues. Some respondents noted that when the system was stable, customers could complete their transactions in a single visit, which was rarely possible under the manual system.

RTSA staff also emphasized that the reduction in processing time improved workload management and staff productivity. By spending less time on administrative checks and paperwork, employees were able to serve more customers within the same working hours. This efficiency gain was particularly evident during peak service periods, where the system helped manage higher transaction volumes more effectively.

RTSA respondents agreed that the improvement in processing speed enhanced the agency's capacity to deliver timely public services. This finding directly aligns with the study's objective of assessing efficiency in public service delivery, as timeliness is a critical indicator of operational

efficiency. The reduced processing time not only improved internal efficiency but also contributed to increased customer satisfaction and public trust in RTSA services.

#### **4.2.4 Data Accuracy, Consistency, and Record Management**

BUS was widely perceived by RTSA respondents to have significantly improved data accuracy and integrity within service delivery operations. Employees explained that the shift from manual to automated data capture reduced common errors such as incomplete records, duplication, and inconsistencies that were previously prevalent under the paper-based system. The built-in system validations and standardized data fields ensured that information entered at one point complied with required formats before submission, thereby minimizing human error.

Respondents further noted that the centralized database ensured consistency of records across all departments. Once data was entered or updated, it automatically reflected across the system, eliminating discrepancies between departments and reducing the need for repeated data entry.

Verbatim:

“Errors have reduced because the system validates information. Once data is entered correctly, it reflects everywhere.”-Respondent 22

In addition, employees highlighted that BUS improved record traceability and auditability. The system maintained digital logs of transactions, user actions, and approval timelines, making it easier to track changes and identify accountability at every stage of service delivery. Respondents indicated that this enhanced transparency strengthened internal controls and reduced opportunities for manipulation or loss of records. As a result, management was better positioned to monitor performance and make informed, evidence-based decisions.

Beyond data integrity, BUS was also reported to have facilitated seamless information sharing and collaboration across RTSA departments. Respondents explained that departmental silos, which previously hindered coordination, were significantly reduced. Staff from different units could access the same client records simultaneously, enabling smoother handovers and faster service completion. This shared access reduced duplication of effort and improved continuity in service provision.

Verbatim:

“Departments now work as one unit because everyone is connected to the same system.”-

Respondent 11

Employees further noted that improved collaboration enhanced communication between front-line service staff, ICT personnel, and supervisory officers, leading to quicker resolution of system-related issues and service queries. This collective approach improved overall service flow and reduced operational bottlenecks.

Overall, These findings demonstrates that BUS has significantly enhanced operational efficiency at RTSA by improving workflow integration, reducing processing time, strengthening data accuracy and integrity, and enhancing internal coordination. These efficiency gains reflect an improved institutional capacity to deliver timely, reliable, and transparent public services, in line with the objectives of the Government Backbone Unified System and the broader public sector digital transformation agenda.

### **4.3. Implementation Challenges and Strategies**

#### **4.3.1 Initial Technical and Organizational Challenges**

Despite the operational benefits associated with the Government Backbone Unified System (BUS), RTSA respondents reported that its implementation was accompanied by several technical and organizational challenges, particularly during the initial rollout phase. Employees indicated that system instability was common in the early stages, with frequent system downtimes, slow network connectivity, and power interruptions significantly disrupting service delivery. These challenges affected the agency’s ability to serve customers consistently and efficiently, often resulting in long waiting times and customer dissatisfaction. RTSA respondents explained that when the system was unavailable due to network or power failures, service provision came to a complete halt, as employees could no longer access client records or process transactions.

Verbatim:

“At the beginning, the system was not stable. When the network went down, we could not serve customers.”-Respondent 32

In addition to technical challenges, respondents highlighted organizational challenges, particularly resistance to change among some staff members. Employees who were accustomed to manual, paper-based systems were initially reluctant to adopt the new digital processes. Respondents noted that this resistance slowed down system adoption and, in some cases, affected service efficiency during the transition period. Some staff expressed fear of making errors in the system or uncertainty about their ability to use new technologies effectively. By and large, these initial challenges underscored the complexity of transitioning from a manual to a fully integrated digital system within a public sector institution.

#### **4.3.2 Training and Capacity Building**

Training and capacity building emerged as a critical determinant of effective BUS implementation. While most RTSA respondents acknowledged that training was provided prior to system rollout, many indicated that the training was limited in duration and scope. Employees reported that the training sessions focused mainly on basic system navigation and did not sufficiently cover advanced functionalities or troubleshooting procedures. Several respondents expressed that the lack of continuous training and refresher courses reduced staff confidence, particularly when system updates or new features were introduced. As a result, some employees relied on informal peer support or self-learning to navigate system challenges.

Verbatim:

“We were trained only once, and after that, we had to learn on our own. Continuous training would have helped.”-Respondent 35

RTSA respondents further noted that insufficient training limited the full utilization of BUS capabilities, as some staff only used basic functions and avoided advanced features that could further enhance efficiency. This gap in capacity building constrained the system’s potential impact on service delivery.

#### **4.3.3 Management Strategies and Mitigation Measures**

To address the identified challenges, RTSA management implemented several mitigation strategies aimed at stabilizing the system and supporting staff during the transition. Respondents reported

that management deployed ICT support teams to provide on-site technical assistance, developed user manuals, and collaborated with system developers to resolve persistent technical issues. These interventions helped reduce system downtime and improved staff familiarity with the system over time.

Verbatim:

“Management responded by bringing ICT officers on site whenever there were problems, and that helped.”-Respondent 28

Despite these efforts, some respondents felt that management could adopt a more proactive approach to further enhance system performance. Suggested improvements included upgrading network infrastructure, investing in backup power solutions, and providing advanced and continuous user training. Respondents emphasized that proactive planning would reduce disruptions and strengthen long-term system sustainability.

These findings reveal that while the implementation of BUS at RTSA faced technical, infrastructural, and human resource challenges, management interventions played a significant role in mitigating many of these issues. However, respondents emphasized that sustaining efficiency gains requires continuous staff training, reliable ICT infrastructure, and effective change management strategies. Addressing these areas would enable RTSA to fully realize the potential of BUS in enhancing efficient and resilient public service delivery.

#### **4.4 General Perceptions and Customer Impact**

##### **4.4.1 Perceived Impact on Customer Experience**

From the employees’ perspective, the Government Backbone Unified System (BUS) has positively transformed customer experience at RTSA by significantly reducing waiting times, simplifying service procedures, and enhancing transparency in service delivery. Respondents consistently noted that the system streamlined customer flow by minimizing unnecessary movements between offices and reducing repetitive verification processes. This resulted in quicker service completion and reduced confusion among customers.

Employees explained that, unlike the pre-BUS era where customers were required to move from one desk or office to another to complete a single transaction, BUS consolidated service processes into a more coordinated and centralized workflow.

Verbatim:

“Customers don’t have to move from office to office anymore. Everything is done in one place.”  
-Respondent 31

As a result, respondents perceived customers to be more satisfied and confident in RTSA services, as they could clearly understand service steps and timelines. Reduced uncertainty and improved predictability of service outcomes were cited as key contributors to enhanced public trust in the agency. RTSA respondents identified several key strengths associated with BUS implementation. These included faster service delivery, centralized data management, improved accountability, and enhanced transparency. Employees emphasized that the centralized nature of BUS ensured that all transactions were digitally recorded and traceable, reducing the risk of data manipulation and unauthorized alterations.

Verbatim:

“The system promotes transparency because every transaction is recorded and can be tracked.”-  
Respondent 3

Respondents further explained that the availability of audit trails improved internal accountability, as staff actions could be monitored and reviewed. This increased institutional credibility and reduced opportunities for corruption or malpractice, which had previously undermined public confidence in RTSA operations.

Despite the notable improvements, respondents acknowledged that BUS is highly dependent on external infrastructural factors, particularly electricity supply and internet connectivity. Employees reported that system downtime caused by power outages or network failures could completely halt service delivery, leading to customer frustration and operational inefficiencies.

Verbatim:

“When there is no power or internet, we cannot operate, and customers become frustrated.”- Respondent 12

Respondents noted that such disruptions negatively affected customer perceptions, as service delays were often beyond the control of frontline staff. This dependency highlighted the vulnerability of digital systems in contexts with inconsistent infrastructure. To enhance the sustainability and resilience of BUS, RTSA respondents proposed several improvement measures. Key recommendations included the installation of backup power solutions, enhancement of network infrastructure, and regular system maintenance and updates to minimize downtime. Additionally, respondents emphasized the importance of continuous staff training and broader stakeholder sensitization to ensure optimal system utilization.

Verbatim:

“There should be standby power and more training so that services continue even during disruptions.”-Respondent 11

These suggestions reflect employees’ recognition that technological efficiency must be supported by reliable infrastructure and human capacity development to sustain service improvements. These findings highlight that BUS has significantly improved customer experience and institutional transparency at RTSA by streamlining service processes, enhancing accountability, and reducing service delivery uncertainties. However, respondents emphasized that the sustainability of these benefits is contingent upon addressing infrastructural dependencies and strengthening system resilience.

By and large, the findings indicate that the Government Backbone Unified System has substantially improved the efficiency of public service delivery at RTSA in Lusaka, particularly through enhanced operational efficiency, improved data management, and positive customer experiences. Nonetheless, persistent technical, infrastructural, and capacity-related challenges suggest that continuous investment, proactive management, and strategic planning are essential to maximize the system’s long-term effectiveness and ensure consistent service delivery.

#### **4.5 Customer Perspectives on the Efficiency of the BUS System at RTSA**

Customer responses provided critical insight into how the Government Backbone Unified System (BUS) has influenced frontline public service delivery at RTSA. Drawing from both Likert-scale responses and open-ended questions, customers' perceptions revealed substantial improvements in service clarity, speed, accuracy, and overall satisfaction, while also highlighting persistent infrastructural challenges that affect system reliability.

#### **4.5.1 Clarity and Accessibility of Service Processes**

Customers overwhelmingly reported that the introduction of BUS improved the clarity, predictability, and accessibility of RTSA service processes. Unlike the pre-BUS period, where procedures were perceived as fragmented and inconsistently applied, the new system was described as structured and standardized across service points. Respondents explained that the computerized workflow guided staff step-by-step, which in turn helped customers understand the process without confusion or reliance on informal assistance. Customers felt more informed and confident about what was required at each stage of service delivery.

Verbatim:

“The process is now clear because everything follows steps on the computer. You are told exactly what to do.”-Customer 11

Several customers emphasized that the clarity of procedures reduced anxiety and uncertainty, particularly for first-time users. Reduced ambiguity also meant fewer mistakes, fewer repeat visits, and less time wasted seeking clarification. These findings suggest that BUS enhanced procedural transparency, which is a core dimension of efficiency in public institutions. Clear procedures reduce transaction costs for both service providers and service users, leading to smoother service delivery.

#### **4.5.2 Timeliness and Speed of Service Delivery**

A dominant theme across customer responses was the significant improvement in service speed following the implementation of BUS. Most customers indicated satisfaction with the time taken to complete their transactions, noting that services which previously took several hours or even a full day were now completed within a much shorter period. Customers attributed this improvement

to automated verification, faster retrieval of records, and reduced physical movement between offices.

Verbatim:

“Before, you could spend the whole day here, but today my service was done much faster.”-  
Customer

However, while the majority expressed positive views, a minority of respondents provided more cautious assessments. These customers acknowledged that service speed was highly dependent on system functionality. During periods of network instability or system downtime, service delivery slowed significantly.

Verbatim:

“When the system is working, service is fast, but when the network is slow, everything delays.”-  
Customer 22

This highlights that while BUS has improved timeliness, efficiency gains remain conditional upon stable ICT infrastructure.

#### **4.5.3 Staff Competence and Effective Use of the System**

Customer responses further revealed generally positive perceptions of staff competence and professionalism in operating the BUS system. Most respondents agreed that RTSA officers were knowledgeable, confident, and efficient in using the computerized platform. Customers reported that staff was able to retrieve records promptly, provide clear guidance, and resolve issues without unnecessary delays.

Verbatim:

“The officers know what they are doing on the computer, and they don’t waste time.”-Customer

Despite these positive assessments, a small number of respondents observed differences in staff proficiency, particularly during peak periods or when new staff members were deployed. In such instances, customers perceived slight delays when staff sought assistance or technical support. The

findings suggest that human capacity remains a key enabler of technological efficiency. While BUS provides the digital infrastructure, staff competence determines how effectively its capabilities are translated into improved service delivery.

#### **4.5.4 Accuracy, Reliability, and Error Reduction**

Customers widely perceived BUS as having improved the accuracy and reliability of RTSA services. Respondents expressed confidence that the computerized system minimized errors related to personal details, payments, and transaction records issues that were more common under the manual system. Customers appreciated that information was verified before processing, reducing the likelihood of incorrect records or payment discrepancies.

Verbatim:

“With the computer system, mistakes are fewer because everything is checked before it is processed.”-Customer

Improved accuracy enhanced trust in RTSA services and reduced the need for corrections or repeat visits. From an efficiency standpoint, fewer errors translate into reduced administrative workload and better utilization of organizational resources.

#### **4.5.5 Overall Customer Satisfaction with RTSA Services**

Overall, customer satisfaction levels were high, with most respondents expressing positive experiences with RTSA services on the day of data collection. Satisfaction was strongly linked to faster processing times, clearer procedures, improved organization, and perceived fairness in service delivery. Customers also appreciated reduced congestion and fewer repeat visits, which lowered indirect costs such as transport expenses and time away from work. One respondent summarized this satisfaction by stating:

“I am satisfied because the service was quick and transparent compared to before.” -Customer

Dissatisfaction among a minority of respondents was mainly associated with external disruptions, such as power outages or system downtime, rather than dissatisfaction with staff conduct or service procedures.

#### **4.5.6 Perceived Change in Service Delivery Compared to the Pre-BUS Period**

When asked to compare current service delivery with previous experiences, customers consistently described the change as positive and transformative. Respondents highlighted improvements in organization, professionalism, transparency, and efficiency.

Verbatim:

“There is a big difference. Before, everything was slow and confusing, but now it is organized.”-  
Customer

This comparison underscores the role of BUS as a catalyst for institutional modernization and improved public sector performance at RTSA.

#### **4.5.7 Perceived Strengths of the BUS System**

Customers identified several strengths of BUS, including speed, transparency, reduced errors, centralized processing, and improved service coordination. Respondents valued the reduction in bureaucratic procedures and the ability to complete services with fewer steps.

Verbatim:

“What I like most is that services are faster and you don’t have to go back and forth.”-Customer

These strengths contributed to increased public confidence in RTSA and improved perceptions of government efficiency.

#### **4.5.8 Areas Needing Improvement**

Despite the overwhelmingly positive perceptions, customers also highlighted areas that require improvement. The most common concerns related to system downtime, slow network connectivity, long queues during peak periods, and inadequate communication when system disruptions occurred.

Verbatim:

“They should improve the network and inform customers when the system is down.”-Customer

Customers suggested that real-time communication, alternative service arrangements during outages, and infrastructure upgrades would further enhance service reliability. The expanded thematic analysis of customer responses demonstrates that the Government Backbone Unified System has substantially improved the efficiency of public service delivery at RTSA in Lusaka. Improvements in procedural clarity, service speed, accuracy, staff effectiveness, and overall customer satisfaction indicate meaningful progress toward responsive and citizen-centered service delivery. However, the sustainability of these efficiency gains remains dependent on system reliability, infrastructural stability, and continuous staff capacity development. Addressing these challenges will be essential for maximizing the long-term impact of BUS and consolidating public trust in RTSA’s service delivery framework.

#### **4.6 Strategic Impact and Efficiency of the BUS System**

This section presents an in-depth analysis of the strategic impact and efficiency of the Government Backbone Unified System (BUS) at the Road Transport and Safety Agency (RTSA), based on stakeholder perspectives. The findings illustrate how BUS has influenced strategic direction, operational efficiency, service integration, and public service delivery, while also highlighting implementation challenges and future development pathways.

##### **4.6.1 Strategic Rationale for BUS Implementation**

Stakeholders consistently indicated that the primary strategic rationale behind the implementation of the Government Backbone Unified System at RTSA was to modernize public service delivery through comprehensive digital integration. The system was introduced as part of broader public sector reform initiatives aimed at improving efficiency, transparency, accountability, and coordination across government institutions. Respondents emphasized that prior to BUS, government systems operated in silos, resulting in fragmented service delivery, duplicated processes, and limited data sharing among institutions. According to stakeholders, BUS was

envisioned as a centralized platform that would streamline operations by integrating disparate systems, reducing manual interventions, and enabling real-time information exchange. This strategic intent was viewed as critical in enhancing decision-making, improving service turnaround times, and minimizing opportunities for inefficiencies and corruption.

Verbatim:

“The main goal was to integrate services and move away from isolated systems so that government services can be delivered faster and more efficiently.”-Official 3

Overall, stakeholders perceived BUS as a strategic tool aligned with national e-government and digital transformation agendas, aimed at improving service quality while strengthening institutional accountability within the public sector.

#### **4.6.2 Impact on Operational Efficiency**

From a management and policy perspective, stakeholders generally assessed the impact of BUS on operational efficiency as positive and significant. Respondents reported that the system has improved the volume of transactions processed daily, reduced processing times, and enhanced workflow coordination. The automation of previously manual processes was cited as a key driver of these efficiency gains. Stakeholders further noted that BUS has reduced operational costs through decreased reliance on paper-based systems, resulting in savings on printing, storage, and document handling. Improved digital recordkeeping and audit trails were also highlighted as contributing to better financial control and compliance monitoring.

Verbatim:

“With BUS, we can handle more transactions in a day using the same number of staff, which shows improved productivity.”-Management 22

Additionally, stakeholders noted indirect efficiency benefits, including reduced errors, faster verification processes, and improved coordination between departments. These improvements collectively suggest that BUS has enhanced operational efficiency by optimizing resource utilization and simplifying service delivery processes at RTSA.

### **4.6.3 Achievement of a Unified Government Platform**

Stakeholders acknowledged that BUS has made notable progress toward achieving its objective of creating a unified and integrated government service platform. Respondents highlighted improved data sharing and interoperability between RTSA and selected government institutions, which has facilitated faster verification, reduced duplication of services, and improved coordination. However, stakeholders also recognized that full integration across all ministries, departments, and agencies has not yet been fully realized. While BUS has established a solid technological and institutional foundation, respondents noted that some government entities remain partially integrated or are still operating legacy systems.

Verbatim:

“The system has laid a strong foundation for integration, although not all government agencies are fully connected yet.” -Policy Maker

These findings indicate that while BUS has largely achieved its strategic objective of promoting system integration at RTSA, continued efforts are required to extend interoperability across the entire public sector.

### **4.6.4 Key Challenges During Rollout**

Despite the overall positive impact, stakeholders identified several challenges encountered during the rollout of the BUS system. Key challenges included budgetary constraints, limitations in ICT infrastructure, inter-departmental coordination difficulties, and resistance to organizational change. Network instability and inconsistent power supply were frequently cited as factors affecting system reliability and availability, particularly during the early phases of implementation.

Verbatim:

“Infrastructure was a major challenge, especially connectivity and power, which affected system availability.” -Management 44

In addition to technical challenges, stakeholders reported organizational resistance stemming from the transition from manual to digital processes. Some staff initially expressed concerns about job security, increased workload, or lack of technical skills, which slowed adoption in certain units.

#### **4.6.5 Mitigation Strategies and Policy Responses**

To address these challenges, stakeholders reported the adoption of several mitigation strategies and policy responses. These included a phased implementation approach, which allowed the system to be tested, refined, and stabilized before full-scale deployment. Stakeholder engagement meetings were also conducted to foster buy-in, address concerns, and clarify system benefits. Policy directives mandating the use of BUS were introduced to ensure compliance, while collaboration with ICT partners helped improve system infrastructure and technical support.

Verbatim:

“We adopted a phased approach and worked closely with ICT partners to stabilize the system before full implementation.”-Government Official

Most stakeholders viewed these mitigation measures as largely effective, though some acknowledged that infrastructural and coordination challenges persist, particularly in expanding the system beyond RTSA.

#### **4.6.6 Staff Training and Change Management**

Stakeholders emphasized that staff training and change management played a critical role in the successful adoption of BUS. Respondents reported that RTSA implemented training workshops, distributed user manuals, and provided ongoing technical support to build staff capacity and confidence in using the system.

Verbatim:

“Training was key; once staff understood the benefits, resistance reduced significantly.”-RTSA Management

However, stakeholders recommended more continuous and advanced training programs to accommodate system upgrades, new functionalities, and staff turnover. This highlights the importance of sustained capacity building to ensure long-term system effectiveness.

#### **4.6.7 Customer Feedback Mechanisms**

Stakeholders reported that RTSA utilizes multiple mechanisms to capture customer feedback on service delivery. These include suggestion boxes, customer service desks, and periodic customer satisfaction surveys. In addition, system-generated data and reports are used to monitor service performance trends and identify areas requiring improvement.

Verbatim:

“We use both physical feedback tools and system reports to understand customer experiences.” -  
RTSA Management

These mechanisms were viewed as essential in supporting customer-centered service delivery and continuous improvement.

#### **4.6.8 Impact on Service Delivery Indicators**

Based on stakeholder perceptions and available service data, BUS was reported to have positively influenced key service delivery indicators. Respondents cited reduced waiting times, improved service consistency, and greater transparency as major outcomes. Enhanced predictability of service processes was also noted to have improved public trust and satisfaction.

Verbatim:

“Customer satisfaction levels have improved because services are faster and more predictable.”-  
Government Official

These improvements suggest that BUS has contributed to more reliable and accessible public services at RTSA.

#### **4.6.9 Future Development and Scaling of BUS**

Looking ahead, stakeholders outlined plans to further develop, scale, and integrate BUS across RTSA and other government institutions. Proposed initiatives include system upgrades, enhanced ICT infrastructure, expanded digital services, and stronger inter-agency collaboration.

Verbatim:

“The long-term plan is to scale BUS across more institutions so that citizens can access multiple services through one platform.”-Policy Maker

Stakeholders emphasized that sustained political support, funding, and coordination will be critical to achieving these goals.

#### **4.6.10 Transformational Role of BUS in Public Service Delivery**

Overall, stakeholders widely regarded BUS as a transformative tool for public service delivery in Zambia. Respondents emphasized its role in improving efficiency, enhancing accountability, reducing corruption risks, and strengthening citizen trust in government institutions.

Verbatim:

“BUS is a game-changer for public service delivery; it has changed how government works with citizens.”-RTSA Management

The thematic analysis of stakeholder interviews demonstrates that the Government Backbone Unified System has significantly improved strategic efficiency, operational performance, and customer-focused outcomes at RTSA in Lusaka. While challenges related to infrastructure, funding, and full inter-agency integration remain, stakeholders overwhelmingly view BUS as a critical enabler of efficient, transparent, and integrated public service delivery in Zambia.

#### **4.7 Discussion of Findings**

This section discusses the findings of the study in relation to the study objectives, theoretical framework, and reviewed empirical literature. Unlike the presentation of findings, the discussion critically interprets the results, explains underlying patterns, and situates the findings within global,

regional, and local scholarly debates on integrated government digital systems and public service delivery efficiency. The discussion is structured according to the three study objectives.

#### **4.7.1 Objective One: To find out the extent to which the implementation of the Government Backbone Unified System (BUS) had improved operational efficiency at RTSA in Lusaka District**

The findings of this study demonstrate that the implementation of the Government Backbone Unified System (BUS) has substantially improved operational efficiency at RTSA in Lusaka District. This improvement is evident across multiple dimensions, including workflow integration, service turnaround time, staff productivity, data accuracy, and inter-departmental coordination. These results indicate that BUS has effectively addressed many of the inefficiencies that characterized the pre-digital operational environment.

Before BUS implementation, RTSA operations were dominated by manual, fragmented, and paper-based processes, which resulted in slow service delivery, duplication of work, misplacement of records, and limited accountability. The study findings revealed that physical file movement between departments, multiple manual approval stages, and dependence on individual officers significantly constrained efficiency. These inefficiencies align with observations by Mutula and Mostert (2018), who argued that fragmented systems and weak institutional coordination undermine service delivery efficiency in many African public institutions.

Following the introduction of BUS, RTSA experienced a fundamental transformation in operational workflows. The system enabled centralized data access, real-time information sharing, and automated verification processes, significantly reducing processing delays and administrative bottlenecks. The reported reduction in service turnaround time where transactions that previously took several days could now be completed within a day demonstrates tangible efficiency gains. These findings are consistent with global evidence from Estonia's X-Road system, which significantly reduced bureaucratic duplication and processing time through system interoperability (Kattel & Mergel, 2019).

From a theoretical perspective, these efficiency gains strongly support New Public Management (NPM) theory, which emphasizes performance improvement, process optimization, and results-

oriented public service delivery (Hood, 1991). BUS reflects NPM principles by automating processes, reducing bureaucratic layers, improving resource utilization, and enhancing staff productivity. The ability of RTSA to process a higher volume of transactions using the same number of staff mirrors NPM's emphasis on doing "more with less" while improving service quality.

In addition, improved data accuracy, consistency, and record traceability highlight the role of BUS in strengthening internal accountability and performance monitoring. The availability of digital audit trails and standardized data entry reduced errors and enhanced institutional control. This aligns with OECD (2021) findings on Singapore's Smart Nation initiative, where centralized digital platforms improved accuracy, reduced transaction errors, and strengthened performance oversight.

However, the findings also reveal that efficiency gains were conditional rather than absolute. System downtimes caused by power outages and network instability intermittently disrupted operations, temporarily undermining efficiency improvements. This confirms the regional literature by Twizeyimana and Andersson (2019), who noted that while centralized platforms improve efficiency, infrastructural weaknesses can limit their full potential. Thus, while BUS significantly improved operational efficiency at RTSA, the sustainability of these gains depends on the reliability of supporting infrastructure.

The study confirms that BUS has improved operational efficiency at RTSA to a considerable extent, validating both global and regional evidence that integrated government digital systems enhance public sector performance when effectively implemented and supported.

#### **4.7.2 Objective Two: To identify the challenges faced by RTSA during the implementation of the Government Backbone Unified System (BUS) and the strategies used to address them**

Despite the positive efficiency outcomes, the study found that BUS implementation at RTSA was accompanied by significant technical, organizational, and capacity-related challenges, particularly during the initial rollout phase. These challenges influenced the pace of adoption and temporarily constrained the realization of efficiency gains.

Technically, system instability, network connectivity problems, and power outages emerged as major obstacles. During periods of system downtime, service delivery came to a complete halt, demonstrating the high dependency of digital systems on reliable infrastructure. This finding reinforces regional studies such as Sambuli (2019) and Mutula and Mostert (2018), which emphasize that inadequate ICT infrastructure remains a major barrier to effective e-government implementation in Africa.

Organizationally, resistance to change among some staff members posed an additional challenge. Employees accustomed to manual processes expressed uncertainty, fear of making errors, and anxiety over increased accountability in the digital system. This resistance can be explained through Public Choice Theory, which suggests that public officials may resist reforms that alter established routines, increase monitoring, or threaten perceived personal or institutional interests (Buchanan & Tullock, 1962). The BUS system introduced transparency and traceability, which reduced discretionary control and increased performance visibility, thereby triggering resistance among some staff.

Human capacity limitations further constrained implementation. Although training was provided, respondents reported that it was often insufficient, one-off, and limited to basic system functions. This resulted in partial utilization of BUS capabilities and reliance on informal peer learning. These findings align with Nkhuwa (2021) and Nkandu (2022), who highlighted skills gaps and limited system utilization as persistent challenges in Zambia's ICT-driven public sector reforms.

In response to these challenges, RTSA management implemented several mitigation strategies. These included deploying ICT support teams, introducing phased implementation, engaging stakeholders to build buy-in, and providing basic training and user manuals. Over time, these interventions reduced system downtime, improved staff confidence, and increased system stability. These strategies are consistent with Dunleavy et al. (2020), who argue that digital transformation success depends on complementary organizational reforms and continuous capacity development.

However, the findings also suggest that mitigation strategies were largely reactive rather than proactive. Respondents emphasized the need for continuous training, infrastructure upgrades, backup power solutions, and more strategic change management. From an NPM perspective, sustained performance improvement requires ongoing investment in skills, systems, and

institutional capacity rather than one-time interventions. Thus, while RTSA successfully managed many initial challenges, long-term efficiency depends on addressing structural and infrastructural weaknesses.

#### **4.7.3 Objective Three: To determine the effects of the BUS system on customer satisfaction**

The findings indicate that the implementation of BUS has had a strong positive effect on customer satisfaction at RTSA. Customers reported improvements in service clarity, speed, accuracy, transparency, and overall service experience. These improvements significantly reduced transaction costs for citizens in terms of time, effort, and repeat visits.

Customers perceived service processes as more structured and predictable, largely due to standardized digital workflows. This clarity reduced uncertainty and anxiety, particularly for first-time users, and enhanced perceptions of fairness and professionalism. These findings align with OECD (2021) and Dunleavy et al. (2006), who emphasize that digital platforms enhance citizen satisfaction by simplifying procedures and improving service predictability.

The reduction in service turnaround time was a key driver of customer satisfaction. Customers consistently noted that services previously requiring a full day or multiple visits could now be completed much faster. From a New Public Management perspective, this reflects improved service quality and customer-oriented performance, where citizens are treated as clients whose time and convenience matter.

Improved accuracy and reduced errors further strengthened customer trust in RTSA services. Customers expressed confidence in the reliability of digital records and payment verification, reducing the need for corrections or disputes. This supports TAM's assertion that perceived usefulness influences positive user attitudes toward technology (Davis, 1989). When customers perceive a system as useful and reliable, satisfaction and acceptance increase.

However, customer satisfaction was not uniform. Dissatisfaction arose mainly during system downtimes caused by power or network failures. Importantly, customers attributed these delays to infrastructural issues rather than staff inefficiency, indicating a generally positive perception of

RTSA personnel and service processes. This finding mirrors regional studies by Twizeyimana and Andersson (2019), which found that infrastructural instability undermines user satisfaction despite system effectiveness.

Overall, the findings suggest that BUS has significantly enhanced customer satisfaction at RTSA by improving service speed, clarity, transparency, and reliability. However, sustaining high satisfaction levels requires addressing infrastructural vulnerabilities and strengthening system resilience.

## CHAPTER FIVE

### CONCLUSION AND RECOMMENDATIONS

#### 5.1 Introduction

This chapter presents a synthesis of the study by summarizing the key findings, drawing conclusions based on the study objectives, and providing practical recommendations informed by the empirical evidence. The chapter also proposes areas for further research arising from gaps identified during the study. The discussion is grounded in the findings presented in Chapter Four and aligned with the theoretical framework underpinning the study.

#### 5.2 Summary of Findings

The study examined the efficiency of the Government Backbone Unified System (BUS) on public service delivery at the Road Transport and Safety Agency (RTSA) in Lusaka District. The findings revealed that the implementation of BUS has significantly improved operational efficiency, service turnaround time, data accuracy, staff productivity, inter-departmental coordination, and customer satisfaction.

Specifically, the study established that prior to BUS implementation, RTSA operations were characterized by manual, fragmented, and paper-based processes that resulted in slow service delivery, duplication of work, misplacement of records, and low accountability. The introduction of BUS transformed workflows through centralized data access, automation, and real-time information sharing, leading to faster service processing and improved internal coordination.

The study further identified several challenges encountered during BUS implementation, including system instability, network connectivity issues, power outages, staff resistance to change, and inadequate training. Although management implemented mitigation strategies such as phased rollout, ICT support deployment, and basic training, these measures were largely reactive and insufficient to fully address long-term system sustainability.

In terms of customer experience, the findings indicated that BUS has positively influenced customer satisfaction by improving service clarity, speed, transparency, and accuracy. However, customer satisfaction was negatively affected during periods of system downtime caused by infrastructural failures, highlighting the dependency of digital systems on reliable ICT infrastructure.

### **5.3 Conclusion**

Based on the study findings, it is concluded that the Government Backbone Unified System has played a transformative role in improving the efficiency of public service delivery at RTSA in Lusaka District. BUS significantly addressed inefficiencies associated with the pre-digital operational environment by automating workflows, enhancing data management, and strengthening accountability mechanisms. These improvements align with the principles of New Public Management, which emphasize efficiency, performance measurement, and customer-oriented service delivery.

However, the study also concludes that the efficiency gains achieved through BUS are not absolute and remain vulnerable to infrastructural limitations, human capacity constraints, and resistance to organizational change. While management interventions mitigated some implementation challenges, the sustainability of BUS benefits depends on continuous investment in ICT infrastructure, staff training, and proactive change management strategies.

The study concludes that BUS has substantially enhanced operational efficiency and customer satisfaction at RTSA, but maximizing its long-term impact requires addressing systemic and infrastructural challenges beyond the technology itself.

### **5.4 Recommendations**

Based on the findings of the study, the following recommendations are proposed:

5.4.1 It is established in the findings under Section 4.2 and 4.6 that system downtime due to power outages and network instability disrupted service delivery. In light of this finding, it is recommended that RTSA, in collaboration with relevant government agencies, invest in reliable backup power solutions and upgrade network infrastructure to ensure uninterrupted system availability.

The findings in Section 4.3 revealed that staff resistance to change slowed system adoption during the initial implementation phase. It is therefore recommended that RTSA strengthen change management strategies by conducting continuous sensitization programs that clearly communicate the benefits of BUS and address staff concerns related to accountability and system use.

5.4.2 The study found in Section 4.3.2 that training provided to staff was limited in scope and largely one-off, leading to underutilization of BUS features. It is recommended that RTSA implement continuous and advanced training programs, including refresher courses and hands-on system simulations, to enhance staff competence and confidence.

5.4.3 Findings in Section 4.2.4 indicated that BUS improved data accuracy and accountability through digital audit trails. To further strengthen these gains, it is recommended that RTSA institutionalize the use of system-generated performance reports for routine monitoring, evaluation, and decision-making.

5.4.4 The study established in Section 4.5 that customer satisfaction improved due to faster and clearer service processes, but dissatisfaction arose during system disruptions. It is recommended that RTSA improve customer communication mechanisms by providing real-time updates on system status and expected service delays through notice boards or digital platforms.

5.4.5 Findings under Section 4.6 showed that full integration of BUS across all government institutions has not yet been achieved. It is recommended that government policymakers accelerate inter-agency integration by aligning legacy systems with BUS and enforcing compliance through policy directives.

## **5.5 Suggestions for Further Research**

This study focused on RTSA in Lusaka District, an urban setting with relatively better access to ICT infrastructure. The findings revealed that customer satisfaction and system efficiency were influenced by infrastructural reliability and user competence. However, the study did not examine the experiences of rural or elderly populations, who may face additional challenges related to digital literacy and access.

Future research should therefore explore the efficiency and accessibility of the Government Backbone Unified System in rural districts and among elderly or digitally marginalized populations to assess inclusivity and equity in public service delivery.

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## APPENDIX

### GANTT CHART

Months	5	6	7	8	9	10	11	12
Topic selection and approval	✓							
Proposal development		✓	✓					
Proposal approval				✓				
Instrument design (questionnaire)					✓			
Data collection						✓		
Data analysis							✓	
Report writing								✓
Final report review and submission								✓

### BUDGET

No.	ACTIVITY	COST (K)	AMOUNT (K)
1	Data Collection	500	500
2	Data analysis software	800	800
2	Interview: Travel and Communication	500	500
3	Food	500	500
4	Stationery services	500	500
	<b>Total</b>		<b>2800</b>

## **APPENDIX TWO: DRAFT INTERVIEW GUIDES**

### **DRAFT DATA COLLECTION TOOLS FOR RTSA EMPLOYEES**

#### **Introduction**

"Good morning/afternoon. My name is Margeret Soko, a student from the University of Lusaka conducting research on 'An Assessment of the Efficiency of the Government Backbone Unified System on Public Service Delivery: A Case Study of RTSA, Lusaka.' The purpose of this interview/questionnaire is to understand your experiences and perspectives regarding the Government Backbone Unified System (BUS). Your participation is voluntary, and all responses will be kept strictly confidential and used solely for academic purposes. The interview should take approximately 15-20 minutes. Do you consent to participate?"

#### **1. Data Collection Tool for RTSA Employees**

Format: Semi-Structured Interview Guide

##### **Part A: Demographic Information**

1. Job Title/Department: \_\_\_\_\_
2. Length of service at RTSA: \_\_\_\_\_
3. Are you directly involved in using the BUS system? Yes / No

##### **Part B: Interview Questions**

###### **Theme 1: Operational Efficiency**

1. How did your department process client transactions (e.g., vehicle registration, license renewal) before the implementation of the BUS system?
2. Since the introduction of the Government Backbone Unified System, what specific changes have you noticed in your daily workflow?
3. In your opinion, how has the Government Backbone Unified System system affected the speed of completing tasks (e.g., processing time for a driver's license)?

4. How has the Government Backbone Unified System influenced the accuracy of data and record-keeping in your work?
5. Has the system improved communication and information sharing between different departments within Road Transport and Safety Agency? Please explain.

### **Theme 2: Implementation Challenges and Strategies**

6. What were the most significant challenges you or your colleagues faced when the Government Backbone Unified System was first introduced? (Probe: technical issues, staff training, resistance to change, network problems).
7. What kind of training or support was provided to help you adapt to the new system? Was it adequate?
8. What strategies or solutions were used by management to address these challenges? How effective do you think these strategies were?

### **Theme 3: General Perceptions and Customer Impact**

9. From your vantage point, how do you think the BUS system has changed the overall experience for RTSA customers?
10. Overall, what do you perceive as the main strengths and weaknesses of the BUS system in your work at RTSA?
11. Do you have any other suggestions or comments on how the BUS system could be improved?

**Thank you for your time and valuable input.**

# DRAFT DATA COLLECTION TOOLS FOR RTSA CUSTOMERS

## Introduction

"Good morning/afternoon. My name is Margeret Soko, a student from the University of Lusaka conducting research on 'An Assessment of the Efficiency of the Government Backbone Unified System on Public Service Delivery: A Case Study of RTSA, Lusaka.' The purpose of this interview/questionnaire is to understand your experiences and perspectives regarding the Government Backbone Unified System (BUS). Your participation is voluntary, and all responses will be kept strictly confidential and used solely for academic purposes. The interview should take approximately [15-20minutes]. Do you consent to participate?"

## Section A: Demographic Information (Please tick [✓] the appropriate box or fill in the blank)

1. Gender: Male [ ] Female [ ]
2. Age Group: 18-25 [ ] 26-35 [ ] 36-45 [ ] 46-55 [ ] 56+ [ ]
3. Service sought today: Vehicle Registration [ ] License Renewal [ ] Road Tax [ ] Other (Specify) \_\_\_\_\_

## Section B: Perception of Service Delivery

For the following statements, please indicate your level of agreement by ticking [✓] one box per row.

Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
4. The process for getting service at RTSA is clear and easy to understand.					
5. The time taken to complete my service today was satisfactory.					

6. The staff were knowledgeable and could use the computer system effectively.					
7. I believe the computer system (BUS) has reduced the number of errors in my transaction.					
8. Overall, I am satisfied with the service I received at RTSA today.					

**Section C: Open-Ended Questions**

9. Compared to your previous experiences (before the new system), how would you describe the change in service delivery at RTSA?

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10. What is the one thing you like MOST about the current system at RTSA?

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11. What is the one thing you like LEAST or think needs the MOST improvement?

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**Thank you for your participation.**

## **DRAFT DATA COLLECTION TOOLS FOR KEY STAKEHOLDERS**

### **Introduction**

"Good morning/afternoon. My name is Margeret Soko, a student from the University of Lusaka conducting research on 'An Assessment of the Efficiency of the Government Backbone Unified System on Public Service Delivery: A Case Study of RTSA, Lusaka.' The purpose of this interview/questionnaire is to understand your experiences and perspectives regarding the Government Backbone Unified System (BUS). Your participation is voluntary, and all responses will be kept strictly confidential and used solely for academic purposes. The interview should take approximately [15-20 minutes]. Do you consent to participate?"

### **FORMAT: IN-DEPTH INTERVIEW GUIDE**

#### **Part A: General Information**

1. Position/Role: \_\_\_\_\_
2. Organization: \_\_\_\_\_
3. Involvement with the BUS project: \_\_\_\_\_

#### **Part B: Interview Questions**

##### **Theme 1: Strategic Impact and Efficiency**

What were the primary strategic goals for implementing the BUS at RTSA?

1. From a management/policy perspective, how would you assess the BUS's impact on RTSA's **operational efficiency**? (Probe for metrics like cost-saving, transaction volume, staff productivity).
2. To what extent has the BUS system achieved the goal of creating a "unified" and integrated government service platform?

## **Theme 2: Implementation Challenges and Mitigation Strategies**

4. From your oversight role, what were the most critical challenges encountered during the rollout of the BUS at RTSA? (Probe: budget, inter-departmental coordination, technical infrastructure, change management).
5. What specific strategies or policies were put in place to overcome these challenges? How successful were they?
6. How was staff training and change management handled to ensure buy-in and effective use of the system?

## **Theme 3: Customer-Centric Outcomes and Future Outlook**

7. What mechanisms are in place to gather and incorporate customer feedback on the BUS system?
8. Based on the data available to you, how has the BUS system influenced key public service delivery indicators, such as customer satisfaction and accessibility?
9. Looking ahead, what are the plans for the future development, scaling, or improvement of the BUS system at RTSA and across other government agencies?
10. Is there anything else you would like to add regarding the BUS system's role in transforming public service delivery in Zambia?

**Thank you for sharing your expertise and valuable time.**