AI-MEDIATED SYSTEMS AND THE CO-CONSTRUCTION OF DECISION-MAKING PRACTICES IN A PUBLIC SECTOR ORGANIZATION: AN ETHNOGRAPHIC ANALYSIS OF PRACTICE RECONFIGURATION IN THE TRANSPORT DIVISION'S UTURN SYSTEM

by

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Dedication

To my family.

“We are on the same team” ~ Aunty Cheryl

Abstract

This thesis examines how Artificial Intelligence (AI)–mediated systems are enacted, interpreted, and negotiated in a public-sector context. Through an organizational ethnography of the UTurn traffic management system in Trinidad and Tobago's Transport Division, the study investigates how AI becomes woven into communicative and material practices of decision-making. Rooted in social constructionism and drawing on Practice-Based Studies, sociomateriality, Actor-Network Theory, and ventriloquism, it treats UTurn not as a neutral tool but as a mediating actor. Data were collected via participant observation, semi-structured interviews, ethnographic interviews and document analysis across agencies including the Ministry of Works and Transport, the Transport Division, the Traffic Enforcement Centre Unit (TECU), and the Judiciary. Findings show that the UTurn embeds legal and procedural mandates into daily operations, enabling coordination and traceability while creating tensions around discretion, control, and interpretation of the law. Actors negotiate the system's constraints, demonstrating that AI-mediated governance is an ongoing, communicative, and material reconfiguration of work practices. The study contributes theoretically by reframing AI in public administration as a sociomaterial mediator, and methodologically by showing how ethnography can surface the lived dynamics of digital transformation. Practically, it offers insights for policymakers and administrators seeking to harmonize technological efficiency with human judgment, institutional legitimacy and legislative frameworks.

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List of Acronyms

Acronym	Full Name
AI	Artificial Intelligence
ANT	Actor Network Theory
ICT	Information Communication Technology
KPI	Key Performance Indicators
LO	Licensing Officers
MOWT	Ministry of Works & Transport
MVRT Act	Motor Vehicles and Road Traffic Act
PBS	Practice Based Studies
RTA	Reflexive Thematic Analysis
SIDS	Small Island Developing States
TC	Transport Commissioner
TECU	Traffic Enforcement Centre Unit
TIPS	Transport Integrated Permit System
TTPost	Trinidad & Tobago Postal Corporation
TTPS	Trinidad & Tobago Police Service
VMS	Vehicle Management System

1 Introduction

1.1 Background and Context

Over the past decade, governments worldwide have increasingly turned to Artificial Intelligence (AI) and other data-driven technologies as instruments of public administration reform. From predictive policing and immigration algorithms to intelligent traffic management systems, public institutions are increasingly relying on computational systems to process vast amounts of data, automate workflows, and support decision-making processes that were once entirely human-led. This digital turn in governance has not only redefined administrative efficiency but has also raised critical questions about accountability, transparency, and the very nature of decision-making in public sector contexts.

In many developing contexts, particularly within Small Island Developing States (SIDS) in the Global South such as Trinidad and Tobago, the adoption of AI-enabled systems occurs within complex institutional environments marked by historical bureaucratic legacies, cultural norms, legal reforms, and uneven adoption in public organizations. These systems are often introduced as part of broader modernization initiatives aimed at improving efficiency, reducing corruption, and enhancing service delivery. Yet, the implementation of such systems also surfaces a range of challenges: the translation of global best practices into local contexts, the negotiation between digital infrastructures and existing bureaucratic routines, and the reconfiguration of authority among human (public sector employees) and non-human actors (AI systems and the laws that guide them).

Trinidad and Tobago has faced mounting challenges in traffic management and road governance. Rapid urbanization, an expanding vehicle fleet, without the requisite infrastructural growth, have combined to create persistent congestion, enforcement inefficiencies, and

escalating public frustration. A 2024 study by the United Nations Economic Commission for Latin America and the Caribbean (ECLAC) estimated that commuters in Trinidad and Tobago spend an average of 793 hours annually, the equivalent of one month, in traffic, costing the economy approximately TTD 2.26 billion per year, or 1.37 percent of GDP. These structural pressures on the transport system, combined with the government's thrust for the digitization of the public sector, highlighted the need for institutional modernization, digital integration, and improved enforcement mechanisms (*Trinidad and Tobago Commuters Spend One Month of Life in Traffic Every Year ECLAC Study Shows | United Nations in the Caribbean*, n.d.).

To give greater context, 2.26 billion is more than the entire 2025 combined budgetary allocation given to four (4) key Ministries. The Ministries of Youth Development and National Service, Sport and Community Development, Digital Transformation and Tourism, Culture & the Arts had a collective allotment of 1.48 billion (*Budget Summaries – Parliament*, n.d.).

The shift toward digitization of the organization also unfolded against a long-standing backdrop of reputational and operational challenges surrounding the Licensing Authority, where public discourse repeatedly highlighted concerns over corruption, informal payment practices and document tampering. For decades, media investigations, Auditor General reports, and public complaints pointed to systemic vulnerabilities associated with vehicle registration, licensing transactions, and enforcement processes, contributing to public mistrust and perceptions of entrenched inefficiency and malfeasance. These historical issues have not merely lingered as background noise but have actively shaped the urgency and rationale for reform.

In response, successive administrations have pursued a range of corrective measures, including legislative amendments, strengthened internal controls, targeted investigations, staff suspensions, inter-agency collaboration, and the incorporation of digital monitoring mechanisms

designed to enhance traceability and accountability. The introduction of the UTurn, alongside broader institutional restructuring, represented not only a move toward administrative modernization but also a deliberate attempt to recalibrate the governance of licensing and traffic management from historically paper-based, nebulous and discretionary practices toward a more transparent, standardized, and auditable regime of public sector decision-making (*Commissioner: Systems Being Put in Place to Stop Licensing Fraud - CNC3*, n.d.; *Despite Transport Commissioner's Attempts to Clean Things up, Corruption Still Rampant at Licensing - CNC3*, n.d.; Newsday, 2008; Ria Chaitram, n.d.).

Based on this context the Government of Trinidad and Tobago initiated a series of legislative and technological reforms aimed at transforming the governance of road traffic and vehicle management. The foundation of the legislation was the *Motor Vehicles and Road Traffic (Amendment) Act No. 9 of 2017*, which redefined the legal framework for traffic regulation. The Act introduced several key systems that collectively laid the foundation for the UTurn initiative:

1. the Demerit Points System, establishing a cumulative penalty mechanism for driving infractions,
2. the Red-Light Camera Enforcement System, enabling automated detection and prosecution of traffic violations; and
3. comprehensive reforms to the Fixed Penalty and Traffic Violations Regime, modernizing how offences are recorded, tracked, and adjudicated.

It was against this backdrop, that the UTurn system was developed and introduced under the oversight of the Ministry of Works and Transport (MOWT). Officially launched as part of the Ministry's Traffic Ticketing System, the UTurn represents a technological and organizational

innovation aimed at creating real-time integration between the Transport Division[1], Trinidad and Tobago Police Service (TTPS), Judiciary, and TTPost. According to the Ministry's official website:

> "The UTurn software provides real time connectivity among the Judiciary, the Trinidad and Tobago Police Service, the Licensing Authority, TTPost and the new Traffic Management Center. The interface allows a motorist to file a Notice to Contest on-line, upon answering three short questions. This triggers scheduling of the matter on the court's list, and the motorist receives a court date and location, as well as a video conferencing link if it is required. Upon completion of a matter, the perfected court order will be dispatched from our court case management system via the UTurn interface, to the Traffic Enforcement Center." (*MOWT - UTurn Portal*, n.d.)

The website goes on to note:

> "In 2017, the *Motor Vehicles and Road Traffic Act (Amendment*) was enacted, and the Judiciary entered into a collaborative working relationship with a team comprising representatives of the Ministry of Works and Transport, the Office of the Attorney General and Ministry of Legal Affairs, the Trinidad and Tobago Police Service, TTPost and other stakeholders, to implement a new traffic system. Under the new legislation, matters will only reach the court's list when a motorist decides to contest a Ticket or

[1] The Transport Division is also interchangeably referred to as the Licensing Authority. While the name has been changed officially to Division, "Licensing Authority" is the term that was used for decades. Even in interviews it will be noted that some participants still use the term Licensing Authority.

> charge, and files a Notice to Contest. This allows the Judiciary to concentrate on its core function, which is adjudicating where disputes arise." (*MOWT - UTurn Portal*, n.d.).
>
> "This system seeks to improve outdated procedures and practices for road traffic law enforcement using modern technology – a software management system called the UTurn System. One of the major improvements in the traffic ticketing system is the use of mobile handheld devices by law enforcement officers. These devices automate the way in which traffic tickets are issued to allow greater convenience for recipients. The benefits of these devices include: 1. The migration from a paper-based ticketing system to electronic tickets (E-tickets); 2. A significant reduction in the time taken (from 25 minutes to 2 minutes) to issue and record the details of the traffic violation; 3. Improved accuracy of the information recorded by a law enforcement officer." (*MOWT - Traffic Ticketing System*, n.d.).

The UTurn system automates the issuing of tickets, records officer actions, synchronizes legal data across agencies, and provides motorists with online access to their records. It operationalizes the legislative intent of the 2017 and 2019 amendments, translating legal provisions into everyday administrative practice and creating new possibilities for monitoring, compliance, and data-driven decision-making. The system also integrates features such as automated data processing and real-time tracking with an ICT-based platform designed to support legal compliance under the *Motor Vehicles and Road Traffic Act (Act No. 9 of 2017)*.

The Transport Division's implementation of the UTurn system provides a compelling case for examining the dynamics that arise with the adoption of AI, especially in the context of bureaucracy, legislative guidance and amendments, and the organizational and cultural phenomena that are unique to small island states in the global south. Developed as part of the

government's strategy to digitize and centralize the management of motor vehicle and driver licensing processes, the UTurn represents both a technological and organizational transformation. Through these capabilities, the UTurn mediates decision-making practices at multiple levels, from frontline licensing officers to senior management, the Judiciary, and the general public, creating a new organizational dynamic of communication, data, and authority.

Understanding how such a system operates in practice requires moving beyond technical descriptions of AI and instead focusing on exploring how these technologies are enacted, interpreted, and negotiated in everyday organizational life. Within this organizational space, decision-making is not simply the outcome of data analytics or human judgment but emerges through the ongoing interaction between people, technologies, and institutional norms. As such, the study situates the UTurn not merely as an innovation in public administration but as a site where the meaning of governance, legality, and work itself is being redefined through practice.

1.2 Significance and Rationale of the Study

The increasing adoption of AI in public administration has generated intense scholarly and policy debate about how digital technologies are reshaping governance, accountability, and organizational decision-making. There is significant and continuing research that has explored these issues in advanced economies, however, there remains a significant gap in understanding how AI is integrated and enacted within developing or small-island public-sector contexts**,** where colonial legacies, legal frameworks, and highly bureaucratic organizational structures present distinct challenges. This study addresses that gap by offering an empirically grounded, practice-based analysis of how AI is taken up and made meaningful in the everyday operations of a Caribbean government agency.

While earlier stages of this project and related institutional documents reference the concept of an AI-driven system, this thesis adopts the term AI-mediated to reflect its theoretical orientation and epistemological stance. The term emphasizes that the UTurn does not merely drive decision-making through automation but mediates it, operating through communicative, material, and organizational practices that co-construct authority, accountability, and meaning, viewing technology and human activity as mutually constitutive.

1.2.1 Theoretical Significance

Theoretically, this research advances the conversation on AI and organizational communication by moving the discussion beyond macro concepts of efficiency and productivity and advancing the thought beyond understanding AI in a technical or deterministic way. Rather than treating AI as an external driver of change, the study conceptualizes AI as a system that mediates in the process of decision-making, a communicative and material participant in the co-constitution of organizational life. Through this reframing, the study contributes to a growing body of literature that examines technology as part of the ongoing performance of organization (Orlikowski, 2007; Nicolini, 2012).

By bringing together Practice-Based Studies (Feldman & Orlikowski, 2011; Gherardi, 2018, 2019; Orlikowski, 2000), sociomateriality (Moura & Bispo, 2020; Orlikowski & Scott, 2008; S. V. Scott & Orlikowski, 2025), Actor-Network Theory (Bencherki, 2017; Institut d'Etudes Politiques de Paris (Sciences Po) & Latour, 2017; Latour, 2005), and ventriloquism approach (Cooren, 2012, 2020; Cooren et al., 2013), the study develops an integrated theoretical approach that explains how decisions, authority, and legitimacy are accomplished through interactions between human and non-human actors. This conceptual synthesis provides a

novel framework for analyzing AI-mediated governance, expanding the scope of practice theory within organizational communication to include emerging forms of technological mediation.

1.2.2 Methodological Significance

Methodologically, this study makes a distinct contribution by applying organizational ethnography to the study of AI in the public sector. Much of the existing research on AI in government relies on policy analysis, technical evaluation, or survey data. Ethnography, by contrast, allows for a deeply immersive and interpretive understanding of how systems are used, interpreted, and contested in situ.

By immersing the researcher within the Transport Division and observing the UTurn system in practice, the study captures the lived experiences of employees and managers as they navigate the intersection of automation, law, and bureaucracy. It highlights the everyday workarounds, negotiations, and tensions that accompany digital transformation, dimensions often invisible in quantitative or top-down assessments.

Moreover, conducting an organizational ethnography in a Caribbean public institution provides a methodological intervention in a field dominated by Global North perspectives, it demonstrates the value of ethnographic practice in capturing the cultural and institutional specificities of digital governance in postcolonial and small-island contexts.

1.2.3 Practical and Policy Significance

Practically, the study holds significance for policymakers, public administrators, and technology designers involved in digital transformation within government institutions. By analyzing how the UTurn system is enacted across multiple agencies, the research identifies both the opportunities and frictions that accompany automation in public governance.

Findings from this study can inform policy formulation and system design by emphasizing the importance of communication, training, and interpretive flexibility in technological rollouts. They also underscore the need for public-sector digital reforms to consider organizational culture, national culture, organizational maturity, and legal frameworks, rather than being primarily driven by metrics that measure outcomes.

From a governance perspective, the study highlights how AI-mediated systems can enhance accountability and transparency when embedded thoughtfully, but also how they can introduce new tensions around individual discretion, authority, and control. These insights are vital for designing policies that balance automation with human judgment and ease of adoption.

1.2.4 Regional and Societal Relevance

Within the Caribbean context, this study contributes to a growing discourse on digital governance, modernization, and institutional reform. As regional governments pursue e-governance agendas, the Trinidad and Tobago case provides a valuable empirical example of how such initiatives unfold in practice. The findings demonstrate that digital transformation is not merely a technical process but a cultural and communicative project that reshapes how citizens, institutions, and technologies interact.

By documenting the UTurn system's implementation and its effects on work practices, the research offers lessons applicable to other Caribbean nations pursuing similar reforms. It advances a model of AI adoption that is sensitive to context, communication, and practice**,** offering a blueprint for how digital tools can support, not replace, human-centered governance.

Overall, this study contributes to theory, method, and practice by showing how AI-mediated systems participate in the everyday construction of public-sector decision-making. It reframes digital governance not as a shift from human to machine authority but as an ongoing,

communicatively enacted reconfiguration of organizational life. In doing so, it enriches the understanding of AI's role in public administration and offers a grounded framework for more contextually responsive forms of technological implementation.

1.3 Structure of the Thesis

This thesis is organized into seven chapters, each contributing to the development of the argument that artificial intelligence mediated systems are not merely technological tools but communicative and organizational actors that shape decision-making and accountability in the public sector. The chapters are structured as follows:

1.3.1 Chapter 1: Introduction

This chapter establishes the foundation of the study by outlining its background, context, and research problem. It introduces the UTurn system and its legislative and institutional setting, defines the study's aim and research questions, and presents the theoretical orientation, significance, and rationale.

1.3.2 Chapter 2: Literature Review

The second chapter reviews the existing body of research on AI and public-sector decision-making, digital governance, giving broader and some historical context to the discussion. It critically examines debates surrounding efficiency, accountability, and legitimacy in technologically mediated governance and identifies gaps in understanding how AI systems are enacted in practice. It positions this study in the literature, advancing discussion on AI in governance. It also gives the problem statement and research questions and places the study into the appropriate context.

1.3.3 Chapter 3: Theoretical Framework

This chapter elaborates the theoretical underpinnings of the study. It discusses social constructionism as the guiding epistemology and outlines the main conceptual lenses, Practice-Based Studies, sociomateriality, Actor-Network Theory, and ventriloquism. Together, these frameworks form the analytical foundation for exploring how communicative and material practices constitute organizational life in an AI-mediated public sector environment.

1.3.4 Chapter 4: Methodology

The methodology chapter details the research design, presenting the rationale for using organizational ethnography and describing the data collection and analysis processes. It outlines the field site, participant groups, and methodological procedures, and discusses issues of reflexivity, ethics, and thematic analysis. The chapter concludes with a discussion of the study's methodological scope and limitations.

1.3.5 Chapter 5: Results/Presentation of Findings

This chapter presents the empirical findings derived from observations, interviews, and document analysis. It traces how the UTurn system becomes embedded in daily work practices and how employees, managers, and other institutional actors engage with its technological and procedural dimensions. The findings are organized thematically, following the research questions, to show how AI mediation reconfigures communication, authority, and accountability within the Transport Division.

1.3.6 Chapter 6: Discussion

The discussion chapter interprets the empirical findings reflecting the theoretical framework. It explains how the UTurn system mediates decision-making practices, redistributes agency between human and non-human actors, and transforms organizational routines. The

chapter connects these insights to broader theoretical conversations on sociomateriality, practice and references to the existing literature on AI in governance.

1.3.7 Chapter 7: Conclusion

The final chapter synthesizes the study's main arguments and contributions. It revisits the research questions, highlights the theoretical and methodological implications of treating AI as a mediating actor, and outlines recommendations for policy, practice, and future research. The chapter concludes by reflecting on the broader implications of AI-mediated governance for public-sector reform in the Caribbean and similar contexts.

1.4 Chapter Summary

This chapter established the foundation for the study by introducing the institutional, legislative, and technological context in which the UTurn system operates. It traced the evolution of traffic management in Trinidad and Tobago, highlighting how the *Motor Vehicles and Road Traffic (Amendment) Act No. 9 of 2017* and subsequent reforms sought to modernize enforcement, transparency, and accountability through digital transformation. Within this environment, the UTurn emerged as an AI-mediated system linking multiple agencies, the Traffic Enforcement Centre Unit (TECU), Transport Division, Judiciary, Trinidad and Tobago Postal Corporation (TTPost), and Trinidad and Tobago Police Service (TTPS), into a real-time information network.

The chapter gave context to the core issue that despite policy narratives of efficiency and modernization, less is known about how AI systems mediate and are made meaningful in everyday public-sector work. The chapter also clarified the choice of terminology, emphasizing the concept of AI mediation. In doing so, Chapter 1 positioned the research within contemporary debates on digital governance, accountability, and organizational transformation.

The next chapter reviews the existing literature on AI and public-sector decision-making, tracing scholarly discussions of the evolution of use of AI in the public sector and identifying the conceptual gaps that this thesis addresses.

2 Literature Review

The use of Artificial Intelligence in public sector organizations is an emerging yet rapidly expanding field of inquiry. Much of the existing scholarship on AI in organizations has historically centered on private sector applications, but governments across the globe are increasingly turning to AI to enhance productivity, efficiency, and service delivery (Al-Besher & Kumar, 2022; Darmawati et al., 2025; Sharma et al., 2020). In public administration, AI now operates across multiple levels: from macro-level functions such as policy analysis, policy creation and resource allocation to citizen-facing technologies such as chatbots, digital assistants, and automated decision-support systems. This diffusion of AI into diverse organizational contexts raises pressing questions not only about its technical capacity but also about its purpose, legitimacy, and ethical implications (Sigfrids et al., 2022; Stahl et al., 2022). Consequently, researchers and practitioners alike are grappling with issues of accountability, governance, and the reshaping of work practices. This literature review situates these debates by examining key themes in the scholarship on AI in the public sector, including definitions and conceptual framings, the varied functions and applications of AI, its role in decision-making and organizational practices, and the challenges and ethical concerns that accompany its integration. The literature review ends with the placing this study in the wider context of the literature, defining the research problem and identifying the research questions that drive the study.

2.1 Artificial Intelligence in the Public Sector

2.1.1 Defining Artificial Intelligence in the Public Sector

Scholars diverge in how they define Artificial Intelligence in the public sector, reflecting the technology's evolving complexity and reach. Early definitions, such as McCarthy (2004), emphasized AI's technical and computational capacities, while more recent perspectives position

AI as either a general-purpose, disruptive technology (Benhamou, 2020) or a broad category of tools supporting public servants (van Noordt & Misuraca, 2020). Others highlight AI's cognitive dimension, framing it as the ability to mimic or extend human learning and reasoning (A. Areiqat & Alheet, 2021; Engelbart, 1962). Policy-oriented definitions, such as those advanced by the OECD (Jimenez-Gomez, Cano-Carrillo, & Falcone Lanas, 2020), stress AI's role in generating predictions and decisions with varying degrees of autonomy, foregrounding its potential for governance. Collectively, these perspectives reflect a spectrum: from narrow technical understandings to broad sociotechnical framings that emphasize augmentation, disruption, and public value creation. This study seeks to position AI not merely as a tool but as an actor that reshapes decision-making practices and organizational processes in the public sector. The ambiguity on how the term should be defined led (Wirtz et al., 2019) in their work on the applications and challenges to AI in the Public Sector to synthesize art the varied interpretations found in the literature as reflected in Table 1 below.

Table 1. *Definition of Artificial Intelligence (Wirtz et al., 2019, p.599)*

Authors	**Quotes**
McCarthy et al. (2006, p. 12)	"The study is to proceed on the basis of the conjecture that every aspect of learning or any other feature of intelligence can in principle be so precisely described that a machine can be made to simulate it."
Rich et al. (2009, p. 3)	"[…] the study of how to make computers do things which, at the moment, people do better."
Russel and Norvig, (2010, p. 2)	AI may be organized into four categories: Systems that think like humans. Systems that act like humans. Systems that think rationally. Systems that act rationally.

Adams et al. (2012, p. 28)	"[…] a system that could learn, replicate, and possibly exceed human-level performance in the full breadth of cognitive and intellectual abilities."
Rosa et al. (2016, p. 6)	"[…] programs that are able to learn, adapt, be creative and solve problems."
Thierer et al. (2017, p. 8)	"The exhibition of intelligence by a machine. An AI system is capable of undertaking high-level operations; AI can perform near, at, or beyond the abilities of a human. This concept is further divided into weak and strong AI."

As AI's complexity and the ways in which it can be used change, so too do the ways in which it is defined. This is observed when comparing McCarthy (2004) who saw AI as replicating human behaviour, to Thierer et al. (2017) who saw AI exceeding capacity of human mind. It is assumed that the increased capability of the technology factored into the way AI is being redefined. Interestingly, current AI operations are more closely aligned to Engelbart (1962) who sought to understand and conceptualize human intellect augmentation through the lens of "intelligence amplification." He argued that the resulting H-LAM/T system (a human plus augmentation system) should "exhibit more of what can be called intelligence than an unaided human could; we will have amplified the intelligence of the human by organizing his intellectual capabilities into higher levels of synergistic structuring." (p.11)

He thus seemingly foretold the relationship that would exist with humans and AI when he posited:

> "Not only does the human need to play various roles (sometimes concurrently) in the execution of any given process, but he is playing these roles for the many concurrent processes that are being executed at different levels. This situation is typical for

> individuals engaged in reasonably demanding types of professional pursuits, and yet they have never received explicit training in optimum ways of performing any but a very few of the roles at a very few of the levels. A well-designed H-LAM/T system would provide explicit and effective concepts, terms, equipment, and methods for all these roles, and for their dynamic coordination." (Engelbart, 1962 p.40).

Beyond technical definitions, several scholars frame Artificial Intelligence in the public sector in terms of its capacity to generate public value and reconfigure organizational practice. Bullock (2019), for example, adopts a philosophical lens, arguing that AI's significance lies less in its computational sophistication and more in its interaction with the human element, where its effectiveness is judged by how it complements, rather than supplants, human decision-making. Ahn & Chen (2020) extend this reasoning by situating AI within the category of "frontier technologies", disruptive innovations such as electricity or mechanization that fundamentally restructure economies and societies. In their account, AI in the public sector is not simply a tool for efficiency but a transformative force with wide-ranging social and institutional consequences.

McKelvey & Macdonald (2019) shift the focus further by sidestepping definitional debates altogether and instead articulate criteria for responsible and effective AI. Their frameworks: FAIR (Findable, Accessible, Interoperable, Reusable), FACT (Fairness, Accuracy, Confidentiality, Transparency), and FATE (Fairness, Accuracy, Transparency, Ethics), serve to contextualize the conditions under which AI can legitimately be embedded in public organizations. These criteria implicitly recognize that effectiveness is not merely a technical matter but also a question of governance, legitimacy, and ethics.

More recent scholarship has sought to move beyond definitional debates by embedding values directly into the governance of AI. Mišić, van Est, and Kool (2025) proposed a combined

framework for the good governance of AI in public organizations that balances values of "good order" (e.g., responsiveness, procedural justice, effectiveness) with values of a "good society" (e.g., wellbeing, social justice). Similarly, Ghosh, Saini, and Barad (2025) reviewed global governance approaches and emphasized that accountability, bias, and adaptive regulation must be central to any attempt to define and operationalize AI in the public sector. These frameworks reflect a disciplinary maturation i.e., AI is not only defined technically but also be seen in terms of the ethical and social values it is expected to uphold.

Together, these perspectives highlight a critical shift in the literature, from seeing AI as a bounded technical system to understanding it as a sociotechnical assemblage[2] whose value derives from its entanglement with human practices, organizational norms, and ethical expectations. Yet they also expose a tension, and that is, whether AI should be understood primarily as a revolutionary, disruptive force or as a tool that must be carefully governed to ensure fairness and accountability.

Accepting Artificial Intelligence as a frontier technology with the ability to radically transform organizational and social spaces is significant, because AI, especially in the public sector, is often driven by the access to big data. This reliance on copious amounts of personal information means that the implementation and use of AI must answer questions of how the data is used, by whom it is used, and what considerations are put in place to ensure that information is not used in a way to negatively affect the citizens.

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[2] A sociotechnical assemblage is understood as stratified arrangement of heterogeneous social and material components in which technologies (form of content) and social structures (form of expression) operate in a strongly dual, coded, and territorialized configuration that reflects the classical socio-technical division between action and structure. (Sesay et al., 2016)

2.1.2 Types and Uses of AI in the Public Sector

Understanding the ways in which AI are being used in public organizations gives insight into the current relationship that exists with the technology. There is a significant focus in the literature on the ways in which AI impacts on broader organizational goals and outcomes. Identifying the way in which AI is currently used has the added benefit of foreshadowing how AI will be used in the future.

Having shared an overall view of the types of AI used in public organizations, this section of the literature review identifies the purpose and reasons behind AI use in public organizations. For context, the ways in which AI are predominantly used in the Public Sector have been grouped into the following categories decision-making, human resource management and innovation, highlighting that AI use is diverse and complex and already an integral part of the public sector organizational structure.

Wirtz et al. (2019) identified ten (10) applications of AI that are at use in the Public Sector as seen in Table 2 below which can be grouped into five (5) overarching categories: (i) AI Process Automation (ii) Predictive Analytics (iii) Identity Analytics (iv) Virtual Agents and (v) Cognitive Robotics. These forms of AI have the potential to create the most value for the public and are listed below in Table 2.

Table 2. *Types and Uses of AI In the Public Sector (Wirtz et al., 2019, p. 600)*

AI Application	AI Value Creation and Functional Proposition	Public Sector Use Cases
AI-Based Knowledge Management (KM) Software	Generation and systematization of knowledge – gather, sort, transform, record, and share knowledge Expert systems can support the codification of	Clinical documentation powered by AI (Lin et al. 2018)

	the knowledge of KM Use of neural networks enables to analyze, distribute, and share knowledge with others	
AI Process Automation Systems	Automation of standard tasks; perform formal logical tasks with unpredictable conditions in consistent quality Complex human action processes (formal logical or dangerous tasks) can be transferred to automation systems, which can support humans in performing tasks. May include rule-based assessment, workflow processing, schema-based suggestions, data mining, case-based reasoning, intelligent sensor technology Robotic process automation has emerged as a sub-area through further technology innovations. This leverages the ability of software robots or AI-driven workers to mimic human interaction with user interfaces of software systems	Faster and higher quality request processing for immigration application forms (Chun 2007) Automated image diagnoses (Collier et al. 2017) Human-computer interaction for repetitive tasks like data entry etc. (Jefferies 2016)
Virtual Agents	Computer-based system that interacts with the user by means of speech analytics, computer vision, written data input but may also include real-time universal translation and natural	Task allocation according to the respective area of responsibility of a specific agency (smart HR services) (Zheng et al. 2018). Virtual nursing assistant (Collier et al. 2017). A chatbot

	language processing systems and affective computing. Software that can perform tasks for humans. Sub-areas are chatbots and avatars	for helping refugees that seek asylum to fill out and search documents (Mehr 2017)
Predictive Analytics & Data Visualization	These analytics are based on quantitative and statistical analysis of data. Processing of big data for reporting, prescriptive analysis and predictive analysis. Machine learning as a technical sub-area based on algorithms that can learn from data	Control and performance monitoring in public areas for police departments to determine terror threats and crime hotspots for preventive action (Power 2016). Determine high crime-risk situations to secure public transport (Kouziokas 2017). Forecast model to predict water levels (Kouziokas et al. 2017)
Identity Analytics	Software combined with big data, advanced analytics and identity access management to control the access to IT systems and automate risk-based identity checks. May include deep learning and machine learning, affective computing and artificial immune systems	Facial recognition software to verify or identify criminals in public areas (Power 2016). AI fraud detection to secure governmental data (Hemken and Gray 2016)
Cognitive Robotics & Autonomous Systems	Systems with higher-level cognitive functions that involve knowledge representation and are able to learn and respond, sometimes in connection with affective computing to determine and	Electric-powered autonomous vehicles for public transport (Christchurch International Airport Limited 2016, Jefferies 2016) Robot-assisted surgery (Collier et al. 2017)

	adapt human behavior as well as respond to respective emotions	
Recommendation Systems	An information filtering system. Software-based systems that screen personalized information to predict preferences of individuals	E-service for government offices to provide personalized information for employees (Cortés-Cediel et al. 2017)
Intelligent Digital Assistants (IDA)	Software based on speech analytics Providing an intuitive interface between a user and a system/device to search for information or complete simple tasks	Connecting federal programs to IDA's to make public service information available for customers (Herman 2017) IDA-Amelia to help residents locate information and complete applications forms using speech analytics and affective computing (Jefferies 2016)
Speech Analytics	Software for intelligent recognition and processing of language, understand or respond to natural language, translate from spoken to written language or from one to another natural language. May include real-time universal translation and natural language processing systems (Pannu 2015)	Real-time universal translation (Microsoft 2018) to translate speech and text in face-to-face communications in public service settings. Administrative workflow assistance with voice to text transcription (Collier et al. 2017)
Cognitive Security Analytics & Threat Intelligence	Additional application for cognitive technologies to analyze security information through natural language processing and machine learning	Applications like Watson for cybersecurity (Dheap 2017) to support human security analysis in the public sector.

	Interpret and organize information and provide reasoning	

Sousa et al. (2019) identified ten major domains in which AI is currently applied in the public sector, ranging from core functions such as public safety, defense, and health to less traditional areas such as recreation, culture, and social protection. The sheer breadth of these applications underscores the extent to which AI has become systemic to governance, touching nearly every dimension of public administration. Yet this expansion raises critical concerns, Roman & Natalia (2019) warn that legislative frameworks have not kept pace with the rapid diffusion of AI, creating risks of overreach and potential violations of citizens' rights. Zeng (2020) similarly cautions that in contexts where governments wield AI as an instrument of political control, the very breadth of AI's reach can amplify authoritarian tendencies.

Henman (2020) adds an early critical voice to these classifications, highlighting that while AI opens possibilities for efficiency and service innovation, it also raises pitfalls concerning legality, accountability, and bias. Neumann et al. (2024) advanced the Technology–Organization–Environment (TOE) framework to study adoption in Swiss public organizations, demonstrating that different factors matter at different stages of adoption. Their study adds a time dimension to adoption research, showing that technological factors dominate early, organizational factors later, and environmental factors far less than previously assumed. This process perspective enriches the understanding of how public organizations integrate AI beyond static typologies.

These tensions highlight a central paradox. The more AI permeates the public sector, the greater its promise for efficiency and innovation, but also the greater the risks of inequity, misuse, or abuse. Historically, AI was framed as a support tool for enhancing organizational

efficiency primarily to be used by management in the public sector and valued for its role in improving policy development. Today, however, its problem-solving capacity extends deeply into the everyday operations and practices of public servants and stakeholders. This shift from the strategic to the mundane, marks a critical evolution in the meaning of AI in governance, no longer an external instrument of policy, AI is now embedded in the very routines through which public organizations constitute their work. It is precisely this entanglement with everyday practice that this study seeks to examine.

2.1.3 Public Sector Frameworks on the Use of AI

Across advanced economies, governments have moved beyond technical definitions of Artificial Intelligence toward policy frameworks that embed ethical, social, and strategic priorities into AI deployment. The UK, for example, has published guidelines outlining not only the technical use of AI but also the ethical considerations and public value outcomes expected from its adoption (UK, 2019). This framing situates AI within a governance discourse that emphasizes responsible innovation and the balance between efficiency and accountability.

The OECD offers a more expansive, quasi-technical definition, describing AI as a "machine-based system" capable of making predictions, recommendations, or decisions based on human-defined objectives, with varying levels of autonomy (Jimenez-Gomez, Cano-Carrillo, & Lanas, 2020). Here, AI is presented simultaneously as a technical system and a governance object: its value lies not simply in automation but in how it is steered toward public objectives. Similarly, the European Union's framework emphasizes legitimacy and public trust, declaring that AI should serve as a force for good that enhances well-being (Artificial Intelligence Act, 2021). In contrast to the OECD's functional definition, the EU's language is more

explicitly normative, positioning AI as a societal instrument whose acceptance depends on safeguarding human-centered values.

Canada and the United States adopted different but complementary approaches, Canada's framework highlights its ambition to be a world leader in AI while still being cognizant of social and human resource implications, particularly issues of data privacy, workforce retraining, and the distributional effects of technological change (Gaon & Stedman, 2018). This approach reflects Canada's broader social policy orientation and positions AI as both an innovation strategy and a labor market challenge. The United States, by contrast, advances a more strategic and security-oriented stance through the Artificial Intelligence Initiative Act of 2019, which establishes ongoing financial and legislative support for AI research and implementation as seen in Table 3. The U.S. approach goes further than its counterparts in explicitly preparing for autonomous, defense-related, and decision-making applications, and its statutory definition of AI reflects this breadth: AI encompasses systems that perform under unpredictable conditions, mimic human cognition, or act rationally as intelligent agents (Artificial Intelligence Initiative Act, 2019).

Table 3. *Artificial Intelligence As Defined By The US Artificial Intelligence Initiative Act, (2019)*

ARTIFICIAL INTELLIGENCE as defined by the Artificial Intelligence Initiative Act. 2019:
(A) Any artificial system that performs tasks under varying and unpredictable circumstances without significant human oversight, or that can learn from experience and improve performance when exposed to data sets.
(B) An artificial system developed in computer software, physical hardware, or other context that solves tasks requiring human-like perception, cognition, planning, learning, communication, or physical action.
(C) An artificial system designed to think or act like a human, including cognitive architectures and neural networks.

(D) A set of techniques, including machine learning, that is designed to approximate a cognitive task.
(E) An artificial system designed to act rationally, including an intelligent software agent or embodied robot that achieves goals using perception, planning, reasoning, learning, communicating, decision making, and acting.

More recently, scholars have sought to theorize these national frameworks in comparative and evaluative terms, Vatamanu & Tofan (2025) argue that AI integration into governance must be assessed not only for efficiency but also for resilience, sustainability, and vulnerability to risks such as bias and cybersecurity threats. Ghosh et al. (2025) extend this argument globally, reviewing governance models across the EU, US, and India. They conclude that adaptive and hybrid governance (blending regulation, self-regulation, and stakeholder participation) is necessary to ensure both innovation and accountability in public sector AI.

These frameworks highlight both convergence and divergence in developed economies. There is broad consensus on the need for ethical guardrails and public trust, but sharp contrasts remain in emphasis: the UK and EU focus on legitimacy and accountability; the OECD seeks universal definitional clarity; Canada highlights social and labor concerns; and the U.S. elevates innovation and defense. This variation reveals a tension between AI as a public good and AI as a strategic asset. For public sector organizations, this underscores that definitions are not neutral: they are politically and institutionally situated, shaping not only how AI is implemented but also how its risks and opportunities are framed.

2.2 The Use of AI By Public Organizations

The literature examining the relationship between Artificial Intelligence and innovation in public organizations typically develops along two major streams: first, the innovativeness of the technology itself, and second, the ways in which AI enables or facilitates innovation within

organizational processes. Much of the scholarship emphasizes the former, attributing agency to AI as a disruptive and transformative force in governance (Abbas & Aftab, 2019; Berryhill et al., 2019; McKelvey & Macdonald, 2019). Far fewer studies, however, attend to the human dimension of innovation, the ways in which employees and managers interpret, adapt, and integrate AI into their work practices. Where the human element is acknowledged, it is often accompanied by recognition that this area remains underexplored. This gap is particularly significant because while AI systems rely on linear and binary forms of prediction, human decision-making is rarely so straightforward.

2.2.1 The Use of AI in Public Sector Innovation

The friction between technological outputs and human judgment, combined with organizational resistance and the limited resources often allocated to AI experimentation, makes it challenging to generate substantive claims about AI's innovative capacity in the public sector (Berryhill et al., 2019; Campion et al., 2020; Henman, 2020). What emerges therefore, is a dual image of AI in governance: at once an inherently innovative technology and a potential catalyst for organizational innovation, but one whose success depends on how human actors and institutions negotiate its adoption and use.

This process perspective has been extended in the work of Neumann et al. (2024) who argue that innovation through AI adoption unfolds differently across organizational contexts and stages of integration, shaped by both organizational readiness and external pressures. Similarly, Haesevoets et al. (2025) highlight that innovation potential is mediated by perceptions at different organizational levels, while leaders often see AI as a driver of transformation, frontline employees express caution, preferring AI to remain an aid rather than a substitute. These studies

underscore that innovation is not simply technologically determined but also socially negotiated within organizations.

Tõnurist & Hanson (2020) identify that innovation as a standalone concept is insufficient to drive the innovation process, rather it must be "explicitly recognized and supported" (p.7) if it is to work. As summed up by van Noordt & Misuraca (2020), "much of the current research on AI or algorithms in fact often focuses solely on the technology itself, but fails to take into consideration the complexity of implementation of ICTs - or in this case AI – and interactions with people within public administrations." (p.9).

Van Noordt & Misuraca's analysis is framed within the concept of technological determinism, the idea that technology is one of the primary drivers of change and culture in a society. This approach has two hypotheses about the relationship between technology and society: the first is that the technology of a given society is a fundamental influencer of the various ways in which a society exists; and secondly changes in technology are the primary and most important source that leads to change in the society (De la Cruz Paragas & Lin, 2016; Hauer, 2017). In accepting that technological innovation and culture are inextricably linked, it then is reasonable to see how advancements in Artificial Intelligence have a direct impact on the way things are done in the organization. Moreover, in accepting that AI can be used in more pervasive ways i.e. in everyday practices that are entangled with human stakeholders, AI as a partner will fundamentally transform decision-making processes. It should be noted that the innovation is not without its challenges and the integration of technology into decision-making is not a seamless process, the success of integrating AI into public organizations depends on workers' trust in AI technology (Glikson & Woolley, 2020). Even though innovation is the goal and the attendant benefits desirable for public organizations, to successfully integrate AI into the

organization, we need to consider not only the technical aspects but also the human element in the process (Jarrahi, 2018; Mateescu & Elish, 2019). The study of the impact of AI on the practices of organizational stakeholders takes on even more significance as AI directly addresses the ways in which decision-making is affected by innovation and the overall cultural shifts in organizations that are likely to result from increased dependence on technology.

Innovation within public organizations enhances governments' capacity to serve citizens by enabling more effective resource planning, attracting investment, and fostering new business opportunities. It also supports the development of institutional frameworks that aid in talent retention while ensuring that the public sector keeps pace with innovations in the private sphere (Abbas & Aftab, 2019). Within this context, Artificial Intelligence functions as a critical tool, underpinning and accelerating these processes of organizational renewal and transformation.

2.2.2 The Role of AI in Public Sector Decision-making

As more public organizations implement AI to facilitate decision-making, there are two major philosophical approaches guiding AI use: (i) the capacity of AI to learn and make decisions and (ii) the impact of AI on human decision-making processes (Reis et al., 2021). This study is guided by the latter idea of the impact of AI on human decision-making processes, which allows researchers to be better able to understand the ways in which public organizations are evolving and predict the direction of the growth. Dwivedi et al. (2021), posit that the capacity of AI to engage in deep neural learning (Roy et al., 2018; Wimmer et al., 2020) makes predicting outcomes more certain; the margin of error is reduced and the inconsistency of human decision-making is minimized.

Areiqat & Alheet (2021), in their examination of AI-Human interaction, state that "AI-technologies will be able to automate some repetitive tasks, freeing up time for civil servants to

concentrate their time on more valuable tasks. In addition, the insights given by AI-technologies could support civil servants with relevant knowledge to improve the quality of public services." (p.237). The argument is that AI augments the everyday practices of the public servant, eliminating some tasks, which allows employees to refocus on other more pertinent decision-making issues. This position is supported by Susar & Aquaro (2019), whose study examined the use of AI by the Kazakhstan government to improve policy making and overall decision making in the public sector.

The use of AI in public organizations could also improve cross-sectoral and interdepartmental communication (Mikhaylov et al., 2018), assisting in the proper allocation of scarce resources, predictive analytics and digital assistance (Ahn & Chen, 2020) and eliminate human uncertainty in jobs where the job complexity is low (J. B. Bullock, 2019). AI is also used for security and as a way of combating disinformation (Henman, 2020). Public sector organizations have used AI to facilitate decision and policy making through the coalescing of large volumes of data into patterns and trends that assist in more accurate projections. For example China's Suzhou Municipality has been using the Suzhou Public Security Crime Prediction System since 2014 to predict the locations and times of theft, which in turn received greater police numbers (Henman, 2020).

One of the central themes in the literature focuses on human-AI collaboration and argues that AI does not necessarily replace human workers but rather complements them in organizational decision-making. Abbas and Aftab (2019), argue that employees in AI-enabled organizations are not rendered redundant, instead, AI supports complex decision-making by combining algorithmic outputs with human experience in what they term an assemblage of team problem-solving. Similarly, Shrestha et al. (2019) emphasized AI's role in filtering redundant

information and narrowing the field of alternatives, thereby enabling humans to focus on more prudent outcomes. Ammitzbøll Flügge et al. (2021), in their study of caseworkers, found a preference for AI as decision-support rather than full automation, suggesting that introducing AI for routine tasks while preserving human discretion in areas of uncertainty offers a pragmatic entry point for adoption in the public sector.

This collaborative vision is echoed by Seeber et al. (2020), who advocate treating AI as a team member in decision-making rather than a mere tool, and by von Krogh (2018), who likens AI's role to a division of labor. In this perspective, AI assumes responsibility for data-intensive, complex tasks, freeing humans to engage in deliberation, interpretation, and judgment. The concept of augmentation has therefore gained traction, with scholars delineating models such as task substitution (full automation), task augmentation (AI assisting humans), and task assemblage (AI as a peer collaborator) (Grønsund & Aanestad, 2020).

The introduction of AI into public sector organizations has generated widespread fears of job loss and reassignment (Reis et al., 2021), yet the literature cautions that such outcomes are not inevitable. Several studies suggest that automation in decision-making does not automatically displace workers but instead reshapes roles and responsibilities in more complex ways (Bader & Kaiser, 2019; Haesevoets et al., 2021; Trunk et al., 2020). Even so, the organizational context matters significantly, resistance to change, coupled with limited expertise in AI within public sector environments, can make new technologies appear disruptive rather than supportive, particularly if their introduction is not aligned with broader strategic objectives (Campion et al., 2020; Dwivedi et al., 2021b; Pūraitė et al., 2020; Sun & Medaglia, 2019).

Beyond these structural challenges, employees themselves voice reservations about how AI alters their work practices and raise concerns about data governance. Critical questions

emerge for example: is the data used for hiring, firing, and performance evaluation fair? (Tambe et al., 2019) Should humans ever be fully replaced by AI? And crucially, who bears responsibility when AI systems fail to deliver expected outcomes? (Flavián & Casaló, 2021). These anxieties highlight that the integration of AI is not merely a technical or efficiency issue but one that implicates organizational trust, accountability, and the ethics of decision-making.

Recent empirical work reinforces these tensions, Ahn & Chen (2022) showed that public employees' willingness to adopt AI depends not only on efficiency gains but also on prior experience and attitudes toward fairness and ethics. Haesevoets et al. (2025) provided experimental evidence that public servants remain skeptical of fully autonomous AI, preferring it in an advisory capacity rather than as a replacement decision-maker. Differences in interpretation also emerged between managers and staff, with managers being more open to extensive AI use. Complementing this idea is Heinisuo et al. (2025), who documented the implementation of chatbots in local government and highlighted dilemmas of legitimacy and meaningfulness, emphasizing that AI adoption is negotiated in practice rather than smoothly introduced. Together these studies show that AI's role in decision-making remains contested and context dependent.

Yet, alongside these anxieties about job displacement, bias, and accountability, a parallel strand of scholarship presents a more optimistic view, suggesting that AI's integration may not erode human roles but instead create new opportunities and elevate the quality of decision-making.

While some scholars emphasize the risks of job loss, others project more optimistic outcomes. Drawing on a study in the UAE, Halaweh (2018) suggests that the introduction of AI into the public sector will not only create new forms of employment but also strengthen the capacity of government across sectors. Similarly, Agarwal (2018) highlights a qualitative

difference between earlier technologies and AI, arguing that unlike static tools, AI evolves in tandem with human users, a process he refers to as the Consumer Internet of Things. In this vision, billions of connected devices generate data that reveal the fine-grained details of social and organizational life, expanding the scope of decision-making resources. From this perspective, the jobs most vulnerable to replacement are those that are already redundant, while AI's deeper integration enables employees to redirect their attention toward higher-order functions such as strategic decision-making, problem-solving, and innovation.

Pagliari, Chambon, and Berberian (2022) deepen this discussion by introducing the concept of sense of agency, i.e., the subjective feeling of initiating and controlling actions, in human–AI interaction. Their review demonstrates that increasing levels of automation can diminish this sense of agency, threatening trust, acceptability, and operator involvement. Importantly, they argue that AI should be treated less as a mere tool and more as a social partner, with interactions understood through the lens of human–human collaboration. From this perspective, explainable AI (XAI) becomes central, not only for transparency but also for restoring human operators' sense of agency, thereby making AI-supported decision-making both more legitimate and more acceptable.

Raisch & Krakowski (2021), describe augmentation as a coevolutionary process where humans learn from machines while machines simultaneously adapt through human interaction. This framing highlights a conceptual shift where AI is no longer seen solely as a tool but increasingly as an actor with agency in decision-making processes, with implications ranging from routine work to high-level policymaking.

Shrestha et al. (2019) further identify three overarching modes of influence: algorithmic inputs into human decision-making, human inputs into algorithmic outputs, and aggregated

human–AI decision-making, with the latter aligning closely with assemblage and co-evolutionary models, illustrating how hybrid teams emerge in practice. Real-world examples include Deep Knowledge Ventures in Hong Kong, which appointed an AI system, "Vital," (Validating Investment Tool for Advancing Life Sciences) to its board of directors, crediting the algorithm with guiding successful investment decisions (Zbinden & Sutter, 2024). While exceptional, such cases illustrate the degree to which organizations are experimenting with integrated decision-making.

2.3 Challenges to AI in Public Organizations

The challenges associated with adopting and implementing AI in public organizations are multifaceted, encompassing legal, regulatory, organizational, and ethical dimensions. At the regulatory level, governments continue to grapple with how best to structure oversight mechanisms tailored to their specific contexts (Misra et al., 2020; Wirtz et al., 2020). One of the concerns is that if AI use remains under-regulated, it may generate decisions that are empirically correct yet harmful to society. Equally pressing are issues of cross-sectoral collaboration, where organizations with differing approaches to AI may struggle to integrate or communicate effectively (Mikhaylov et al., 2018). Zeng (2020) further highlighted the risks in authoritarian contexts, where governments may exploit AI and its data infrastructures to consolidate power and curtail rights and freedoms, a concern echoed in global debates on surveillance and digital authoritarianism (Susar & Aquaro, 2019).

2.3.1 Challenges of AI Agency, Automation and Augmentation

Gray (2017) highlights three prerequisites for effective teamwork: mutual concern, vulnerability, and faith in competence, which AI cannot fully satisfy, raising doubts about its trustworthiness as a teammate. Similarly, Berberian (2019) warns that increasing reliance on AI

risks diminishing human agency, sparking persistent questions over who is in charge? The emotional dimension of collaboration is also important; while AI's detachment from feeling makes it efficient, it also undermines its capacity to engender trust, moreover, the prospect of augmentation is often shadowed by fears that it represents a transitional stage toward automation and replacement.

Empirical studies provide further grounding to these conceptual claims. Haesevoets et al. (2025) demonstrate that employees are more comfortable with AI in supportive roles, reflecting a preference for augmentation over automation. Heinisuo et al. (2025) similarly show that collaboration between humans and AI in local government settings is fraught with dilemmas over trust, legitimacy, and meaningfulness. These studies reinforce the idea that collaboration is less about seamless integration and more about continuous negotiation of AI's role in practice.

These tensions underscore the complexity of human–AI collaboration in the public sector. On the one hand, AI promises to augment human capacity by reducing cognitive burdens, structuring information, and enabling more informed decision-making. On the other hand, unresolved issues of trust, accountability, and agency continue to shape both perceptions and practices of collaboration. The literature thus converges on a central paradox, AI is increasingly envisioned as a teammate in organizational decision-making, yet it remains a teammate whose presence generates uncertainty, skepticism, and contested boundaries of authority.

The growing body of research on AI and organizational decision-making increasingly trends toward attributing agency to AI systems within the workplace (Dwivedi et al., 2021; Kamalnath, 2019; Seeber et al., 2020). This perspective in the literature suggests that organizations may gradually shift their cultures to embrace AI as a legitimate partner in decision-

making, motivated by aspirations of greater proficiency, efficiency, and productivity (Kamalnath, 2019).

van Rijmenam & Logue (2021) offer the following as a definition of AI agency, "[AI agency] is coordinated artificially intelligent intentionality formed in partial response to perceptions of human agency, material agency and/or other AI agency" (p.131). They factor into their interpretation the relationship that technology has in the organization, as well as the evolution of AI based systems to be autonomous decision makers, giving credence to the idea that AI is increasing its role as a collaborator in concert with its human partners. Perhaps the understanding of AI agency in this study is most consistent with the idea posited by Natale et al. (2025), who argue that AI agency is a fluid concept, which adds value to the discussion as they intentionally factor in all of the competing variables that contribute to understanding how AI impacts decisions, people, processes and policies in the organization, while understand that organizations are contextual, dynamic and sites of tension and continuous reconfiguration. Quoting their position directly they say:

> The concept of fluidity emphasizes notions of flow, convergence, instability, coexistence, friction, and change, rather than solid, definitive states of either algorithmic entities or human entities. This fluid approach suggests approaching algorithmic power and agency through tensions, mediations, and transversalities that characterize the mutual interactions between users and algorithms. Agency, in this context, remains fluid precisely because it encompasses not just single directions or fixed relationships, but geometries of flows through which users project meaning on algorithms while algorithms at the same time impact their lives and experiences. (p. 1066).

Consequently, debates on AI augmentation and agency are not merely technical but also ethical and organizational, they raise pressing questions about responsibility, equity, and legitimacy in decision-making. For organizational communication and behavior scholars, the task is to examine how humans and AI co-construct decisions in practice and to offer guidance to practitioners on how best to cooperate with these technologies without ceding essential elements of human agency. As AI becomes further integrated into routine processes, the challenge is not whether collaboration will occur, but how it will be managed to balance efficiency with accountability, innovation with trust, and automation with human discretion.

2.3.2 The Ethical Challenges of AI-mediated Decision-making

As AI becomes embedded in routine organizational functions, the practices surrounding tasks, duties, and decisions are reshaped, require organizations to reconsider how AI's role in decision-making is defined and legitimized (Paschkewitz & Patt, 2020). The central concern is not only whether AI can collaborate with humans but also how such collaboration reconstitutes organizational practices. This study contributes to this conversation by examining how decision-making processes are altered when AI is integrated into everyday decision-making, laying a foundation for further research into how AI reconfigures organizational life in a public sector context.

Some scholars propose that AI should be conceptualized as a new form of immaterial infrastructure, Jaume-Palasi (2019) for instance, argues that AI constitutes a revolutionary layer underpinning human behavior and organizational interaction. Unlike traditional infrastructure, AI's algorithms are fluid, continuously revised to reflect shifting human needs and societal demands. This dynamism allows AI to adapt not only to changing functional requirements but

also to evolving ethical expectations, reinforcing its role as a flexible yet powerful structuring element within organizations.

The contribution of Pagliari et al. (2022) is also significant, as they propose a continuum from mediated agency, where humans act on machine-mediated decisions, to forms of shared "we-agency" that mirrors social collaboration. In doing so, they emphasize that AI's opacity and autonomy blur traditional boundaries of responsibility, requiring new frameworks to understand how agency is distributed between human and artificial actors which aligns with broader calls for viewing AI not only as infrastructure but as a contributor with consequential influence on organizational decision-making.

Ethical concerns remain central to the debate on AI's agency in decision-making and Butkus (2020) underscores two major risks: first, that AI inevitably reflects the unconscious biases of its programmers; and second, that it fails to account for the contextual subtleties often essential in human judgment. Far from neutral, AI systems can magnify existing disparities, reproducing and entrenching inequities already present in data. A well-documented example is the use of algorithmic tools in parts of the United States judicial system to assess recidivism risk and guide sentencing decisions (Ettekoven & Prins, 2018; Hao, 2019), because the underlying data were shaped by racially skewed policing practices, the algorithms reinforced systemic bias against Black and minority communities.

Ettekoven and Prins (2018) highlight the deeper epistemological challenge; algorithms identify correlations but cannot establish causation, as they note, "patterns and connections that become visible on the basis of data analysis offer no certainty as to the predicted development or the expected behaviour" (p. 439). This limitation underscores why full automation in decision-making is problematic and why frameworks of augmentation and collaboration remain more

tenable. AI's predictive logic is powerful, but its inability to interpret context, nuance, and causality makes human oversight indispensable.

Ethical accountability represents another critical challenge, Baum (2020) describes a "blame chain" that emerges when AI systems fail to deliver expected outcomes, with responsibility shifting from developers, to users and ultimately to the organizations promoting the AI adoption. If ethical considerations are left solely in the hands of developers, there is a heightened risk of embedding bias into systems. Conversely, if ethics are treated as part of use and practice, it opens a more fluid and contextual understanding of what constitutes acceptable applications of AI. Ergo, inequity remains an enduring issue, Areiqat & Alheet (2021) emphasize that AI systems inherit and reproduce the biases embedded in their training data, creating a significant risk of discriminatory outcomes. If decision-making is ceded entirely to algorithms, the potential for reinforcing social inequities is amplified rather than reduced.

As the general use of AI increases, so too does the research concerned with the ethical implications of AI's usage (Etzioni & Etzioni, 2017; Ryan et al., 2021; Shneiderman, 2020; Sumser, 2017; Walz & Firth-Butterfield, 2019). The idea that technology can be given agency and responsibility for decisions, is an even narrower area of research and one on which researchers have not yet been able to agree. Chang (2020) argues that rightness and wrongness are human conditions and linked to the way humans view the world and as such right and wrong varies from person to person; Chang further argues that because AI is built around the principles of agility and efficiency, which often require access to large amounts of data, the access to data comes at the price of personal privacy. Chang posits that there must be a cross functional team to ensure that decisions are not made solely on what is best for AI, but what is ethical based on the

organization's principles. At the core of this thought is that increasing consideration should be given to AI's increasing agency in decision-making processes.

Automated decision-making presents further difficulties as Kuziemski & Misuraca (2020) note. In Canada, AI is already used in immigration processing, where algorithms determine eligibility and, in some cases, exclude candidates who might otherwise qualify. Such cases reveal the inseparability of AI from questions of power and specifically, who defines the criteria and who ultimately holds authority over decision outcomes. Ahn and Chen (2020) extend this concern by asking how arbitration should occur between an AI-augmented decision, and one made by a human? Delegating decision-making power exclusively to AI risks undermining the learning and deliberative aspects of governance.

These challenges are also reflected in recent governance-oriented research as Vatamanu & Tofan (2025), who identified vulnerabilities tied to algorithmic bias, workforce adaptation, and cybersecurity, arguing that AI adoption without supportive governance structures risks undermining its intended benefits. Mišić et al. (2025) contend that governance must balance values of efficiency with values of justice and wellbeing, while Ghosh et al. (2025) highlighted how global variations in governance approaches reveal persistent accountability gaps.

Allowing AI a primary role in decision-making must be considered in the context of several questions. According to Walz & Firth-Butterfield (2019), these questions include: who becomes liable for decisions made by AI that result in negative consequences? In instances where AI is the primary/only decision maker, how do we account for the loss of humanity in decision-making processes? Also, with significant reliance on AI, how do we treat with the loss of autonomy? Sumser (2017) advances this by asking not only who remains liable for decisions

made by AI but also inquires as to how does one disagree with decisions made by Artificial Intelligence?

AI in public organizations is not merely a technical innovation but a site where questions of regulation, ethics, accountability, and power converge. Addressing them requires governance approaches that balance efficiency with legitimacy and social justice. There is justifiable and documented concern in the literature on the challenges of allowing AI carte blanche decision-making in organizations.

2.4 Positioning the Study in the Literature: Bridging the Gap

The literature on AI in public organizations has developed rapidly, moving from early typologies and functional classifications (e.g., Wirtz et al., 2019; Sousa et al., 2019) to more critical concerns with governance, ethics, and perceptions of adoption (Henman, 2020; Kuziemski & Misuraca, 2020; Zeng, 2020). More recent work demonstrates increasing sophistication, focusing on the lived experiences of managers and employees (Haesevoets et al., 2025), the dilemmas of legitimacy and meaning in local government implementation (Heinisuo, 2025), and normative governance frameworks that seek to embed values such as fairness, resilience, and justice into AI adoption (Mišić et al., 2025; Ghosh et al., 2025). This trajectory reflects an evolution from viewing AI primarily as a technological innovation to understanding it as a sociotechnical system that must be situated in organizational, institutional, ethical and cultural contexts.

Yet significant gaps remain, much of the empirical literature continues to emerge from Global North contexts, with limited attention to how AI is integrated into public organizations in the Global South. Second, while recent studies examine implementation and the perceptions around implementation, there is still insufficient focus on how AI is enacted in everyday

practices, and how its introduction reshapes the micro-level interactions, routines, and decision-making processes that constitute organizational life. Third, the literature often treats AI either as a tool or as a governance object, but less often as a participant in practice, with agency to influence organizational processes in ways that are not predetermined.

This study addresses these gaps by examining how AI reconstitutes decision-making and organizational practices within a specific public sector environment. It moves the discussion beyond abstract debates about efficiency, bias, or governance frameworks, to show how AI is lived, negotiated, and made meaningful in context. In so doing, it contributes to three key areas: (i) extending the empirical base of public sector AI research into a Global South setting; (ii) deepening understanding of how human and non-human actors collaborate, navigate tension, or adapt in decision-making processes; and (iii) offering a grounded account of the tensions between technological innovation, organizational culture, and legislative accountability. In this way, the study not only fills a critical empirical and theoretical gap but also provides practical insights for policymakers and practitioners tasked with integrating AI responsibly into public organizations.

2.4.1 The Research Problem

Despite the promise of digital transformation in public administration, the integration of AI systems into governmental operations raises complex questions about how decisions are made, recorded, and legitimized. Within Trinidad and Tobago's Transport Division, the implementation of the UTurn system was intended to modernize traffic management by enhancing efficiency, transparency, and compliance with the *Motor Vehicles and Road Traffic (Amendment) Act No. 9 of 2017*. Yet, while the technological infrastructure enables real-time

connectivity among agencies, it also reconfigures long-standing organizational practices, workflows, and power relations within the public sector.

Historically, decision-making in public organizations in Trinidad & Tobago relied heavily on manual, paper-based, nebulous procedures, a process shaped by bureaucratic norms and an adherence to a Westminster system of governance that is constantly being reconstituted to meet the specific needs of Trinidad & Tobago. The introduction of the UTurn replaced many of these human centered processes with automated data entry, digital tracking, and standardized outputs. These changes altered not only the speed and accuracy of administrative work but also the ways that authority, accountability, and legitimacy were enacted and communicated. Processes that once depended on the professional judgment and knowledge of officers and clerks, is now increasingly mediated through interfaces, dashboards, and system prompts.

However, there is limited empirical understanding of how public servants and other actors actually use and make sense of such AI systems in their everyday work. In practice, the UTurn is not simply a neutral instrument of efficiency, it is a sociotechnical assemblage that redistributes decision-making between human and non-human actors. This raises key questions: How do employees negotiate system constraints and organizational expectations? How do automated processes influence perceptions of fairness, compliance, and discretion? And how are decisions justified when mediated by artificial intelligence?

These tensions point to a broader research problem, while AI is increasingly embedded in public-sector governance, the communicative and material practices through which it reconfigures organizational decision-making remain underexplored. Understanding these dynamics is crucial not only for assessing the effectiveness of systems like the UTurn but also for rethinking what it means for AI to decide, act, and consult in public institutions.

Research on the use of AI in public organizations has focused primarily on policy making and efficiency and as such there is room for increased investigation on how the implementation and integration of AI affects the daily professional practices in public organizations. As AI becomes more intuitive and its uses increase in public organizations, the substantive question becomes what are the implications for this increased usage? AI's ability to contribute significantly to organizational processes mean that researchers must actively consider that the agency of AI in decision-making is increasing. Also to be considered is the increasing functionality and permeability of AI use, means that there is the potential for AI to operate either autonomously or semi autonomously. This study seeks to address what are the implications for decision-making (daily routine decision making as well as policy decisions) when Artificial Intelligence is considered as an increasingly competent contributor to the work processes. The increasing embracing of AI technology in public organizations and the limited understanding of the day-to-day interactions between workers and AI systems leads to examination of how do employees of a public organization collaborate and co-construct their organizational realities with AI automation to support their processes of decision-making?

2.4.2 The Research Questions

This study examines how the introduction of the UTurn system, which was designed to enhance efficiency, transparency, and compliance under the *Motor Vehicles and Road Traffic (Amendment) Act No. 9 of 2017*, reconfigures everyday decision-making, communication, and organizational practice in the Transport Division. By investigating these transformations ethnographically, the study seeks to explore the communicative processes through which AI technologies become embedded in public-sector decision-making.

At the heart of this research is the recognition that AI does not merely automate decisions but mediates the practices through which decisions are made and legitimated. As such, this study moves beyond questions of output, policy or systems analysis to examine the practical, discursive, and material reconstitution of organizational life that accompanies AI integration. It investigates how employees, management, and supporting organizations engage with, adapt to, and contest the system in their daily activities and what this reveals about the broader reshaping of authority and accountability in AI-mediated governance. Accordingly, the research questions are as follows:

2.4.2.1 Main Research Question

How do employees and management in a public organization use and work with an AI-mediated system to support their daily practices and decision-making processes?

2.4.2.2 Sub-Research Questions

RQ1: What new practices emerge within a public organization when management implements and uses an AI-mediated system to support decision-making processes?

RQ2: In what way does the implementation and use of an AI-mediated system in a public organization reconfigure decision-making practices and organizational dynamics?

RQ3: How do employees use an AI-mediated system (UTurn) to support their decision-making during their daily work practices?

These questions frame the study's dual concern with both organizational practice and the implementation of new technology into the public sector and they invite an inquiry that is interpretive rather than evaluative, focusing on deriving an understanding of how meaning, coordination, and authority are accomplished through everyday interaction with technology. The study pursues the following objectives:

1. To examine how employees and management interpret and engage with the UTurn system in their everyday work.
2. To identify the new forms of practice, coordination, and decision-making that emerge through the system's implementation.
3. To analyze how communicative and material interactions with the UTurn system reshape existing structures of authority, accountability, and organizational legitimacy.

2.5 Chapter Summary

This chapter explored the growing body of scholarship on Artificial Intelligence in public sector organizations, tracing how definitions of AI have evolved from narrow computational understandings to broader sociotechnical perspectives that emphasize its role in shaping governance, accountability, and organizational practice. The review highlighted how AI's implementation in government contexts extends beyond efficiency or automation to encompass ethical, institutional, and cultural transformations. It also examined major frameworks and empirical studies addressing AI's integration into public administration, underscoring tensions between innovation and regulation, automation and human oversight, and efficiency and equity.

A recurring theme throughout the literature is that AI does not operate as a neutral tool but as an actor that participates in decision-making, reorganizing relationships of authority and trust within public institutions. Studies on human–AI collaboration and augmentation reveal that the technology's influence lies as much in its social and organizational embedding as in its technical capabilities. These insights are complemented by global policy frameworks, such as those from the OECD, EU, UK, and Canada, which frame AI governance as both an ethical and strategic imperative. Collectively, the literature underscores the need to move beyond functional

analyses toward an understanding of an engaged AI, one that is enacted through human practices, institutional policy, and context organizational guidelines.

Despite the richness of existing scholarship, three notable gaps remain: first, the predominance of Global North perspectives; second, limited attention to how AI is enacted and negotiated in everyday organizational practice; and third, insufficient theorization of AI as a participant with agency in decision-making processes. This thesis addresses these gaps through an ethnographic study of the UTurn system in Trinidad and Tobago, showing how AI mediates and reshapes decision-making, authority, and accountability within a public organization.

The next chapter develops the theoretical framework that anchors this inquiry. It draws on Practice-Based Studies, sociomateriality, and related traditions such as Actor-Network Theory and ventriloquism to explain how human and non-human actors co-constitute organizational practices. By integrating these perspectives, Chapter 3 provides the conceptual tools to analyze AI not simply as technology, but as a communicative and material participant in the reconfiguration of work and decision-making in public sector governance.

3 Conceptual Framework

This chapter establishes the conceptual foundations that guide the analysis of how employees and management in a public organization use and work with an AI system to support their daily practices and decision-making processes. The study adopts a conceptual framework because it synthesises multiple strands of theoretical and empirical scholarship to construct an integrative lens tailored to the specific research problem, rather than applying a single, pre-existing theory. Conceptual frameworks are understood as inductively developed structures that organise interrelated concepts into a coherent system for interpretation and analysis, particularly where no single theory sufficiently captures the complexity of the phenomenon under investigation (Imenda, 2014; Kivunja, 2018; Rocco & Plakhotnik, 2009). Ergo, it draws on Practice-Based Studies (PBS) and complementary perspectives to construct a conceptual frame that helps elucidate the everyday, materially mediated activities through which organizational life unfolds.

By focusing on how practices are accomplished through the interactions of human and non-human actors, this framework demonstrates how decision-making emerges as a distributed and situated process rather than an isolated cognitive event. For the purpose of this study, the definition of decision-making draws from the work of Grosjean & Bonneville (2012), Brassac & Fixmer (2004) and Nutt (2006), who all add salient and pertinent interpretations to decision-making, that recognize the organizational, communicative, sociotechnical and public sector nuance. As such, decision-making is recognized to be a situated, socially distributed, and materially mediated process through which organizational actors construct shared meaning, interpret evolving situations, evaluate possibilities, and converge on courses of action. Decisions made unfold through ongoing interactions among people, technologies, and institutional

conditions, where each contributes resources, constraints, and interprets cues that shape what options become visible, legitimate, or actionable. Rather than a discrete moment or a purely rational choice among predefined alternatives, decision-making emerges through the progressive stabilization of understandings, practices, and artifacts as actors negotiate ambiguity, reconcile multiple viewpoints, and respond to organizational and sectoral logics. In this sense, decisions are not simply selected, they are co-produced through the interplay of human judgment, sociotechnical arrangements, and the broader structural environments within which work takes place.

The chapter is organized into four main sections: the first section introduces the PBS approach and its relevance for understanding AI at work; the second section explores the practice lens for studying technology in organizations; the third section presents key theoretical concepts such as sociomateriality, agencement, actor-network theory, and ventriloquism; and the fourth section synthesizes these perspectives into an integrated conceptual framework for the study.

3.1. A PBS Lens for AI Supported Decision-making

The practice lens, rooted in practice-based epistemology (Feldman & Orlikowski, 2011; Gherardi, 2000, 2018, 2019; Moura & Bispo, 2020; Nicolini, 2012, 2017; Orlikowski, 2000, 2002; Orlikowski & Scott, 2008; S. V. Scott & Orlikowski, 2025), offers a powerful analytical orientation to examine the dynamic interactions that constitute organizational life (Grosjean, 2013). It has multiple interpretations and iterations as scholarship continues to evolve, yet for the purpose of this thesis, the definitions most suited to the research focus will be addressed.

For Schatzki et al. (2001), practices are “organized human activities” involving “practical understanding, rules, and teleoaffective structures” (p. 52). Their position reflects a site ontology, in which the social world is constituted through the ongoing performance of practices. In this

view, practices are the primary building blocks of social life, the organized arrangements through which meaning, action, and order are sustained. Nicolini (2012), while drawing on Schatzki, extends this understanding by emphasizing that practices are not simply sequences of actions but are composed of an inseparable nexus of sayings, doings, and relatings that hold together a particular way of accomplishing work.

While both authors converge on the idea that practices are socially organized and materially mediated, they differ in emphasis. Schatzki offers an ontological lens, highlighting the structural and organizing properties of practices within the social site while Nicolini offers a methodological and relational approach, highlighting the fluidity, interdependence, and transformative character of practices in motion. Together, they frame practice as both an organized arrangement and a living, relational process, a duality that is particularly relevant for this study's interest in organizational decision-making, where human and technological activities are constantly reconfigured through everyday interactions.

Corradi et al. (2008) further enrich this discussion by arguing that the term practice is polysemic, encompassing several meanings relevant to organizational inquiry. They identify three: practice as a method of learning (practice makes perfect), as an occupation or field of activity (e.g., medical or legal practice), and as a way of doing, a processual notion that captures how work is accomplished within specific contexts. This tripartite perspective expands upon Schatzki's ontological and Nicolini's relational orientations by demonstrating that practice operates across multiple analytical levels: from individual learning and professional domains to situated enactments of work. In doing so, Corradi et al. (2008) draw attention to the conceptual elasticity of the term, reminding us that practices can simultaneously represent modes of learning, working, and organizing.

Acknowledging this polysemy is critical for clarifying different theoretical orientations within practice-based studies. Despite interpretive variations, practice theorists converge on two foundational propositions: first, the social world is constituted through practices; it is through everyday activities that social realities are continuously enacted and reproduced (Feldman & Orlikowski, 2011) and second, a practice approach sees the settings in which practices occur as sites to study the nature, development, transformation, and effects of social phenomena (Schatzki et al., 2001). Thus, at its core, a practice lens is defined by its commitment to examining what people do and how those doings co-construct their social realities.

Adopting a practice lens for studying organizational phenomena such as collaboration and collective action refocuses analysis on the situated activities performed by various actors (Geiger, 2009). This approach has been applied across diverse contexts to show how organizational outcomes emerge through the everyday enactment of work. For instance, Bechky (2003) demonstrated how coordination and shared understanding in a manufacturing firm are achieved through the material and discursive practices of engineers, assemblers, and technicians rather than through formal procedures. Similarly, Nicolini (2011) used a practice-based approach to examine collaboration among healthcare professionals, revealing how knowledge is mobilized and shared through situated performances rather than codified protocols. These studies exemplify how the practice lens brings attention to what people actually do and how their interactions sustain the social and material order of work.

Decision-making therefore is not a disembodied cognitive process, but an activity embedded in concrete practices; it unfolds through the use of routines, artefacts, and conversations that enable situated sensemaking and action (Grosjean & Robichaud, 2010). For example, Suchman (2007) illustrated how decision-making in air traffic control and human–

machine interaction depended on the interpretive practices of operators working with complex systems, while Orlikowski and Scott (2015) showed how digital technologies mediated accountability and knowledge-sharing in professional service firms. More recently, Moura and Bispo (2020) demonstrated how AI-based systems in public organizations shaped decision processes by reconfiguring professional discretion and procedural routines. These studies revealed how adopting a practice lens allowed researchers to examine how decisions are accomplished in practice, highlighting the interdependence of people, tools, and material arrangements in shaping organizational action.

The relevance of this approach for the present study lies in its capacity to demonstrate how an AI system becomes embedded within, and co-constitutive of, organizational practices. A practice-based perspective moves beyond abstracted models of decision-making to show how decisions emerge from entangled configurations of human actors, technologies, norms, and material infrastructures. This aligns with recent scholarship emphasizing that studying AI at work requires attention to how it is enacted in situ through practical, embodied engagements. For example, Jarrahi et al. (2023) examine how algorithmic systems mediate collaboration and judgment in knowledge-intensive settings, showing that AI becomes part of distributed decision-making processes. Building on these insights, Scott and Orlikowski (2025) trace AI-in-the-making to show how sociomaterial practices generate the performative effects of automation across contexts

Consequently, the practice lens foregrounds that an AI system in the organization is not merely a tool external to action but becomes part of the doings through which organizational life is continuously configured. This practice-based perspective is thus essential to understanding how automation facilitated by AI, reshapes the everyday work of public-sector employees.

As Feldman and Orlikowski (2011) argue, practices are both structured by institutional logics and improvisationally enacted in response to emergent contingencies, allowing researchers to examine how AI's integration reproduces or transforms existing routines. Together, these contemporary studies reaffirm that a practice-based approach remains vital for capturing the evolving relationship between automation, judgment, and organizational work.

To further underscore PBS' relevance for understanding AI use in the organization, the PBS approach (Feldman & Orlikowski, 2011; Gherardi, 2000; Nicolini, 2012; Nicolini et al., 2016), emphasizes that organizational realities are constituted through situated, materially mediated activities rather than through fixed structures or individual cognition. Within this perspective, technologies are not external instruments applied to pre-existing workflows but are enacted within ongoing practices that simultaneously shape and are shaped by their social and material arrangements. Gherardi (2019) observed, practices are dynamic accomplishments in which knowing and doing are interwoven and collectively sustained through recurrent performances, therefore applying this orientation to the study of AI systems in the workplace, helps gives insight into how such technologies participate in reorganizing authority, accountability, and professional judgment in everyday work (Jarrahi, 2018; Moura & Bispo, 2020; Orlikowski & Scott, 2016)

To appropriately frame the term AI, Schüll et al. (2025) posit that the term Artificial Intelligence is often used too generically, leading to conceptual ambiguity and fragmented research. They instead propose a system that distinguishes between the AI artifact, the subject, and the context in which the system operates. Adopting this tripartite understanding, enables this study to focus on the AI system as socio-technical artefact, enacted by organizational stakeholders within a defined public-sector context, rather than invoking AI as a universal or

abstract construct. In doing so, PBS serves as a rigorous and contextually grounded framework for examining how such systems are not merely technological innovations but negotiated arrangements between the various organizational actors, through which organizational practices, responsibilities, and forms of legitimacy are continuously negotiated. The practice lens thus focuses attention to how technologies become meaningful and consequential through their enactment in everyday work.

Orlikowski (2000) introduced the concept of technology-in-practice to explain how technologies and organizational structures are mutually constituted through recurrent use and this perspective emphasized that technologies do not simply determine outcomes nor do they remain neutral tools; rather, their functions and effects are continuously produced through situated contextual engagement. As such, automation facilitated by AI is not understood as a process of replacement but as a reconfiguration of how work is performed, coordinated, and evaluated. Subsequent practice-based studies have built on the idea of technology in practice, to show how digital and automated systems shape professional discretion and organizational learning by embedding new forms of routinization and traceability into everyday tasks (Feldman & Orlikowski, 2011; Gherardi, 2019; Nicolini, 2012).

Orlikowski's more recent scholarship, however, marks a conceptual shift from studying technology-in-practice to examining AI-in-the-making. In Scott & Orlikowski (2025), this evolution is articulated through a sociomaterial genealogical approach that traces how AI systems come into being, how they are imagined, designed, assembled, and stabilized through iterative human and material interactions. Rather than treating AI as a finished object, they argue that it is a "phenomenon-in-the-making" (p.1), continuously performed and re-performed across multiple sites of practice. This approach emphasizes performativity, versioning, and

accountability, showing that AI's effects emerge through situated enactments involving developers, data infrastructures, users, and institutional norms. This shift extends the practice lens toward a genealogical sensibility, encouraging researchers to attend to how the social and material histories of AI facilitated automation, shape its present performative capacities.

In this study, the practice lens provides a way to understand AI supported decision-making as an evolving and situated phenomenon that augments human decision-making rather than replacing it. Drawing on Scott and Orlikowski's (2025) emphasis on AI-in-the-making, this study views automated decision-support systems as facilitating the redistribution of cognitive and procedural labour between humans and AI. In the context of the public sector, these systems extend organizational capacity by supporting routine assessments, flagging anomalies, and ensuring procedural consistency, yet they also depend on human interpretation to translate system outputs into legitimate and enforceable action. The practice lens, updated through these recent developments, adds credence in analyzing how AI facilitated automation and human judgment intertwine within everyday practices of decision-making.

Having clarified how various scholars define and conceptualize practice, it is necessary to explore how this lens informs the understanding of decision-making in organizational contexts. Rather than treating decisions as disjointed and disparate cognitive acts, practice-based perspectives emphasize the performative, embodied, and situated nature of decision-making.

Within practice-based studies, decision-making is conceptualized as an activity accomplished through the ongoing interactions of people, routines, and material artefacts in specific organizational contexts (Feldman & Orlikowski, 2011; Jarzabkowski et al., 2007). Decision-making is embedded in daily work practices, shaped by the tools and technologies available, the tacit knowledge actors hold, and the norms and rules that guide the

organization. Decisions do not arise in isolation; rather, they are enacted through sequences of practices, negotiations, and adjustments as actors respond to uncertainty, complexity, and situated demands (Suchman, 2007, p. 70).

This perspective highlights that decision-making is not merely about choosing between pre-existing options but is constituted by the practices that define, create, and give meaning to those options. Thus, in this thesis, decision-making is seen as a situated, socially and materially embedded practice through which choices and courses of action are constituted and enacted in organizational life.

Nicolini (2012) suggests that "what is decided, by whom, and how is deeply shaped by the socio-material arrangements within which decision-making practices are enacted" (p. 213). Orlikowski and Scott (2008) further propose that technology becomes an actor within these decision-making practices by providing recommendations, automating tasks, or imposing algorithmic constraints that reconfigure decision authority and responsibility (p. 466). Therefore, decision-making is not detached from context but a situated practice, emerging through interactions among actors, technologies, institutional scripts, and material arrangements (Feldman & Orlikowski, 2011; Suchman, 2007). Decisions materialize through evaluation, deliberation, and justification performed in everyday settings which shifts the analysis away from viewing decision-making as an abstract mental process to recognizing it as an outcome of distributed and materially mediated practices (Orlikowski, 2007; Jarzabkowski et al., 2007).

Jarrahi (2018) argues that decision-making practices are contingent upon levels of uncertainty, complexity, and equivocality, with AI often mobilized to reduce uncertainty through computational analysis, while humans address equivocality through interpretive judgement and

sensemaking. This division of cognitive labour is not automatic but enacted in situated practices of collaboration with AI.

The practice lens offers a powerful framework for examining how decision-making unfolds within the situated, material, and social contexts of everyday work. The following section therefore explores how practice theory, particularly as developed by Orlikowski and others, provides a conceptual foundation for understanding technology, as an integral part of these unfolding practices.

3.2 Practice Lens for Studying AI-based Technology in Organizations

Building on the understanding of decision-making as situated and emergent, this section expands the discussion on the practice lens as articulated by Orlikowski (2000, 2002, 2007) and Scott & Orlikowski (2022, 2025). It examines PBS' relevance for studying AI technologies in organizational contexts and directs analytic attention to the recursive, relational, and materially mediated ways in which technologies such as AI systems become entangled with organizational practices, shaping and being shaped by them.

The practice lens views technology not as a stable, external entity acting upon organizations, but as an enacted phenomenon that gains meaning through everyday use. Orlikowski (2002, 2007) work extends the Orlikowski's (2000) technology-in-practice idea, to demonstrate how technologies are invoked, adapted, and sometimes resisted by organizational members, showing that enactments differ across contexts and that such variations shape how work is accomplished.

In the context of AI technologies, this lens enables scholars to examine how intelligent systems are interpreted, appropriated, and domesticated through organizational practice. Rather than treating AI as a fixed technical system, the practice perspective reveals how it becomes

integrated into existing structures of meaning, accountability, and coordination. Scott and Orlikowski (2025) advance this view by framing AI-in-the-making through a sociomaterial genealogical approach, tracing how AI systems are continually assembled, stabilized, and reconfigured through practice and emphasize that AI should be understood as phenomena-in-the-making; performative, evolving, and context-specific, rather than as discrete artefacts. This position marks the natural advancement of their previous work (Orlikowski and Scott, 2023), where they posit the notion of a digital undertow, highlighting how digital and algorithmic technologies gradually evolve to displace institutional logics and reshape organizational arrangements over time.

These developments extend the practice lens to aid in refocusing the discussion on the dynamic and institutional dimensions of AI, revealing how its use reconstitutes the temporal and normative structures of organizations. These perspectives underscore the analytical value of the practice lens for examining how AI becomes embedded within, and co-constitute, organizational life. AI outputs, recommendations or prompts, do not determine outcomes in isolation rather, they become authoritative or actionable only when situated within established routines, historical practices, and institutional logics (Orlikowski & Scott, 2008). By integrating the foundational notion of technology-in-practice with contemporary insights on AI-in-the-making and the digital undertow, this study positions the practice lens as the key and appropriate framework for analyzing how automation of processes and human discretion are enacted together in public-sector decision-making.

The work by Jarrahi (2018) reinforces that AI-supported decision-making is not plug-and-play but is emergent from collaborative, interpretive efforts between humans and systems, especially under conditions of uncertainty, which taken together with Orlikowski (2002), allows

us to examine how distributed organizing, and collective knowing unfolds through embodied, shared practices. In AI-supported decision-making, knowledge is not stored solely in algorithms or human cognition but enacted through ongoing interactions involving people, interpretations of data, and technical systems.

Orlikowski and Yates (2006) support the idea of a continuous unfolding by emphasizing that change in organizations is often experienced not as large-scale transformation but as continual improvisation and accommodation within existing routines. Thus, the lens captures how AI systems may subtly reconfigure day-to-day work without necessarily replacing human actors, offering a more nuanced picture of organizational change.

Adopting a PBS approach moves beyond basic understandings of human–computer interaction to conceptualize AI as relational. In this study, user/AI collaboration refers to the situated and recursive interplay between human judgment and automation of processes through which organizational action is co-produced. Following Jarrahi (2018), such collaboration encompasses modes like distributed decision-making, mutual adaptation, and task delegation, where human and AI capabilities are intertwined in practice rather than sequentially applied. More recent study expands on the concept of hybrid intelligence, highlighting that effective collaboration involves mutual augmentation, i.e., where humans refine AI systems while AI amplifies human analytical reach (Jarrahi et al., 2022). Within managerial and organizational environments, these hybrid interactions require ongoing negotiation of trust, interpretability, and discretion as AI systems increasingly mediate decision-making processes (Jarrahi et al., 2023; Jarrahi & Ahalt, 2024). Hence, user-AI collaboration is not a static division of labor but a dynamic, practice-based configuration through which knowledge, authority, and responsibility are continually reorganized.

Jarrahi (2018) further contextualizes and defines the user-AI collaboration by identifying three core areas of collaborative decision-making, focusing on the complementarity of AI and humans in executing tasks. The areas are uncertainty, complexity and equivocality and Jarrahi posits that the workload is shared when AI reduces uncertainty through providing real-time access to information while humans make intuitive decisions. AI and humans reduce complexity when human determine the sources of data, while AI collects and curates the data. And finally, user-AI collaboration reduces equivocality when humans negotiate & build consensus and AI analyzes and reflects interpretations (see Figure 1).

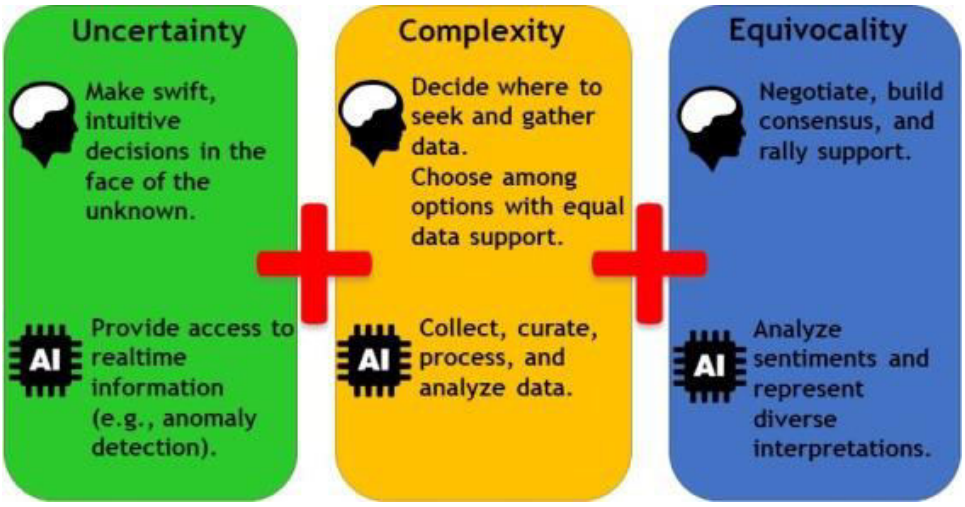

Figure 1. *Figure Taken from Jarrahi (2018, p. 583)*

Moura and Bispo (2020) emphasize that studying user-AI collaboration requires attention to relationality and materiality; AI does not simply assist humans, it reshapes what counts as a problem, what solutions are visible, and who is authorized to act. This aligns with Latour (2005)

Actor-Network Theory (ANT), which conceptualizes agency[3] as distributed across networks of human and non-human actants. In the context of AI, this means that decision-making authority is never fully located in the human user or the machine but emerges from their interactions within broader organizational and institutional configurations.

Fenwick and Edwards (2013) argue that PBS approaches reveal how power, expertise, and accountability are negotiated in socio-material arrangements. In AI contexts, algorithms can become sources of authority that reconfigure professional identities and decision-making norms. This is particularly salient in public sector organizations, where decisions have legal, ethical, and social consequences, and where AI can reshape traditional bureaucratic processes (Ammitzbøll Flügge et al., 2021; J. Bullock et al., 2020; Newman et al., 2022).

Therefore, a PBS approach to user-AI collaboration highlights how decisions emerge from recursive interactions among humans, algorithms, data representations, legal frameworks, and organizational policies. This theoretical framing places AI not as an external technological force but as an embedded actor within practice networks, producing situated effects that can only be understood by examining enaction in context.

Despite its analytical strengths, the practice lens has limitations when applied to the study of AI systems. While Orlikowski's (2000) spotlights how technologies are enacted in situated contexts, it was developed with relatively stable and visible technologies in mind, such as

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[3] Agency, in Actor–Network Theory, refers to the capacity of any entity, human or nonhuman, to make a difference in a network of relations (Latour, 2005, p. 71). It is not a fixed attribute but an emergent effect of associations among heterogeneous actors. Thus, agency is distributed, relational, and enacted, produced through the traces of interactions rather than located in individuals.

groupware or email systems, rather than the adaptive, opaque, and self-updating architectures characteristic of contemporary AI (Orlikowski & Scott, 2008). AI systems often operate through layers of abstraction (e.g., machine-learning models, predictive algorithms) that are not always accessible or interpretable to users. This opacity challenges the assumption that meaning and use can be fully discerned through local practice alone.

However, Scott and Orlikowski (2025) explicitly address this limitation by advancing a sociomaterial genealogical approach to what they term AI-in-the-making. Rather than assuming that technologies are wholly legible in situated use, they argue that AI's performative effects must be understood by tracing how such systems are assembled, trained, and stabilized across multiple sites of practice. This perspective extends the practice lens to accommodate autonomous technologies, recognizing that the conditions of their production and evolution are integral to how they are enacted in organizations. Integrating this view allows researchers to retain the strengths of a practice-based orientation while accounting for the distinctive complexities introduced by AI's algorithmic and data-driven nature.

The practice lens does not always address power asymmetries or broader structural inequalities embedded in technological design and deployment (Gherardi, 2019; Miettinen et al., 2009; Nicolini, 2017). AI in public organizations often reflects regulatory mandates, legal accountability, and bureaucratic hierarchies that are not always visible at the micro-level of practice (Moura & Bispo, 2020). This requires a complementary theoretical perspective to examine how historical, institutional, and political forces shape what practices are possible or legitimate.

To address these limitations, several scholars have extended the practice lens using more recent theoretical developments. For instance, Nicolini, Reinecke, and Ismail (2021) introduce

the concept of enactive legitimation, showing how legitimacy and meaning are materially enacted through ongoing engagement with artefacts, spaces, and embodied routines. Sociomateriality (Moura & Bispo, 2020; Orlikowski & Scott, 2008; Scott & Orlikowski, 2022; Scott & Orlikowski, 2025), complements the practice lens by emphasizing the inseparability of the social and material, allowing AI to be conceptualized not just as a tool in use, but as a constitutive element in the production of organizational realities (Gherardi, 2024; Jarrahi et al., 2023; S. Scott & Orlikowski, 2022; S. V. Scott & Orlikowski, 2025). This is crucial in the context of AI, where algorithmic outputs, system interfaces, and embedded legal frameworks co-produce meaning.

Actor-Network Theory and the concept of agencement provide further support by allowing researchers to trace how AI systems function as actants that participate in networks of authority, control, and discretion (Carroll, 2021; Dubey et al., 2022; S. V. Scott & Orlikowski, 2025). Moura and Bispo (2020) argue that AI is best understood not as a separate or external object, but as a dynamic sociotechnical assemblage, a position also resonant with Orlikowski's (2007) notion of sociomaterial practices.

Finally, Cooren (2010, 2012) concept of ventriloquism extends the practice lens by explicitly addressing the communicative mechanisms through which agency and authority are performed. Whereas practice theory explains how activities are enacted, it does not always account for the discursive work through which actors legitimize or distribute responsibility. Ventriloquism fills this gap by showing how figures such as legislations, departmental policies, and AI systems are animated in interaction, how they speak through organizational actors and shape the trajectory of decisions. In this way, ventriloquism bridges practice-based and discursive approaches by revealing how material and institutional forces become audible. This is

particularly relevant in public sector decision-making where actors justify, defer, or distribute authority to non-human figures (Bencheriki et al., 2020; Carroll, 2021; Dubey et al., 2022).

While the practice lens offers a high-level orientation for studying how technologies like AI are enacted in organizational life, further refinement is needed to understand the concrete elements that constitute these practices. To that end, this chapter now turns to specific theoretical elaborations, such as sociomateriality, agencement, and actor-network theory (ANT), that help unpack the relational and distributed nature of decision-making practices. These perspectives allow for a closer analysis of how human and non-human actants come together to produce organizational outcomes.

3.3 Key Theoretical Concepts

This section introduces the core theoretical concepts underpinning this study's framework. Each concept provides a distinct yet interconnected lens for understanding how AI systems become embedded within organizational decision-making practices. Together, they construct a rich conceptual architecture for examining the recursive, relational, and material-discursive dimensions of user/AI interactions.

3.3.1 Practices as Sociomateriality

In this study, sociomateriality is adopted as a supplementary but core analytical stance that underscores the ontological inseparability of the social and the material in organizational life (Orlikowski & Scott, 2008). From this perspective, technologies are not passive tools applied to pre-existing social practices but are constitutive elements of practice itself. In AI contexts, algorithms, interfaces, legal codes, and professional routines are deeply entangled, producing outcomes that cannot be attributed solely to human or technological agency.

This view has been expanded by Fenwick (2012), who emphasizes that materiality extends beyond tangible artefacts to include texts, data, and discourses. Accordingly, practices are understood as networks of human and nonhuman relations that collectively perform and stabilize activities. Sociomaterial approaches therefore challenge dualisms between subject and object, human and nonhuman, proposing that knowledge and meaning are enacted relationally through ongoing material performances rather than residing in cognition alone (Moura & Bispo, 2020; Orlikowski, 2007).

Fenwick & Dahlgren (2015) add that technology-in-practice is inherently sociomaterial, it gathers human users, algorithmic models, interfaces, databases, legal codes, and organizational goals into assemblages that enable and constrain action (p. 361). In this sense, sociomateriality is not merely a theoretical add-on but is essential for examining how AI becomes meaningful and authoritative in decision-making processes. Rather than treating AI as a separate add-on tool, this approach showcases how decisions emerge from the entanglement of people, algorithms, documents, policies and norms. When the social and material are inseparable, responsibility for decisions becomes a negotiated achievement among human agents, algorithms, and organizational rules (Fenwick & Edwards, 2013).

More recent scholarship situates sociomateriality within rapidly evolving technological infrastructures with Haider & Sundin (2023) highlighting that in contemporary algorithmic environments, machine learning and automation reconfigure notions of agency, trust, and knowledge, making sociomaterial analysis essential for understanding how such systems shape public decision-making. Similarly, Jarrahi and Nelson (2018) demonstrate how both human and technological agencies are materialized in practice through configuration work, the adjustments and interpretive acts users perform to align technologies within local contexts. This notion of

ongoing negotiation underscores that technologies simultaneously enable and constrain work, a dynamic also central to Fenwick's (2012) and Leonardi (2013) discussions of sociomaterial enactment.

Within this study, sociomateriality is operationalized through the tracing of empirical entanglements that reveal how human and AI agencies co-constitute decision-making practices. Specifically, three recurrent forms of sociomaterial practice are examined: (i) Co-performance of humans and AI systems (ii) distributed accountability, how responsibility and authority are shared, deferred, or negotiated between human actors and system outputs; and (iii) material mediation, how the affordances and constraints of technological artefacts shape what becomes visible, actionable, and auditable.

These analytical focal points align with Moura & Bispo (2020) methodological framing, which proposes examining how organizing emerges from human–nonhuman entanglements. This is also consistent with Leonardi's (2013) argument that sociomaterial inquiry must articulate its philosophical and methodological grounding to make visible how technologies and humans mutually constitute organizational realities. By adopting this stance, the study treats AI not as an external influence on decision-making but as a participant in the ongoing enactment of organizational practice which allows for focused attention on how accountability, agency, and legitimacy are negotiated in AI-supported decisions.

3.3.2 Practices as Agencement

The concept of agencement, originating with Deleuze and Guattari in 1980[4] (Phillips, 2006) and adapted to organizational studies by Callon & Law (2005), refers to arrangements of heterogeneous elements that acquire the capacity to act collectively. The term does not denote a

[4] 1987 in English

static structure but a dynamic and provisional configuration through which agency is distributed. In contrast to assemblage, which often implies an already constituted whole, agencement emphasizes the ongoing process of arranging, the active fitting together of human and non-human elements that make practices possible (Nicolini, 2012; Gherardi, 2024).

In organization studies, agencement has become central to practice-based approaches that seek to understand how work, decision-making, and organizing emerge from a temporarily stabilized amalgamation of actors, artefacts, and discourses. Nicolini (2012) employs the concept to highlight the contingent and relational composition of practices, arguing that practices are not separate acts but the effects of continuous assembling of tools, routines, spaces, and norms. Similarly, Gherardi (2024) stresses that agencement conveys the idea of agency-in-connection, i.e., agency as an emergent property of relational arrangements rather than as an attribute of individuals.

This definition distinguishes agencement from adjacent concepts such as network or configuration, whereas network (as used in Actor Network Theory) traces associations between entities, agencement captures the productive capacity that arises when those associations align in a particular moment to perform an activity. It thus focuses not only on the relations but on the effect of those relations in action, the way they generate the conditions of possibility for doing.

In this study, agencement is operationalized as the analytical means of tracing how heterogeneous elements such as people, technologies, rules, and legislative frameworks, come together to enable decision-making practices. This involves examining moments where these elements cohere long enough to perform a function, these temporary alignments of human and

non-human actors are not merely the backdrop for action but the mechanisms through which action becomes possible.

Moura and Bispo (2020) propose that AI systems themselves can be understood as agencements: sociotechnical configurations that integrate algorithms, data models, regulations, and user practices into composite decision structures. From this standpoint, AI facilitated decisions are never purely algorithmic outputs but effects of relational arrangements that distribute authority and accountability across multiple elements. Applying this concept allows the study to analyze how organizational decision-making is continually reconfigured by shifts in policy and new iterations of the technology, each representing a new agencement with different capacities for action.

Ultimately, approaching this study incorporating agencement highlights how decision-making practices emerge from the ongoing coordination of heterogeneous elements and how reconfigurations can produce new forms of control, discretion, or disruption. This perspective complements the sociomaterial stance articulated earlier by providing the analytical vocabulary to trace how specific constellations of human and technological actors come together, hold temporarily, and then evolve.

3.3.3 Actor-Network Theory: Relational Materiality

Actor-Network Theory (ANT), originally developed in the late 1970s and 1980s through the work of scholars such as Bruno Latour, Michel Callon, and John Law, offers a complementary lens for tracing how both human and non-human elements participate in the constitution of agency and organizational reality. At its core, ANT contests traditional dichotomies between social and technical, human and material, by positing that agency is not the

sole property of individuals but emerges relationally through networks of heterogeneous actors or "actants" (Callon, 1999; Latour, 2017; Latour, 1996, 2005).

In ANT, an actant is anything, human or non-human, that makes a difference in a situation (Bencherki, 2017). Rather than assuming pre-existing social structures or categories, ANT approaches the world from a flat ontology in which order, organization, and agency must be traced through actual associations among elements (Latour, 2005). This emphasis on empirical tracing of actor configurations aligns well with this study's aim to examine how intelligent systems participate in public sector decision-making. Here, AI is not merely a technological backdrop or a passive tool, it is a constitutive actant within a larger network involving members of the organization, digital records, legislation, automation, and citizens.

ANT's methodological stance of following the actors makes it particularly suitable for ethnographic inquiry into organizational life, especially where boundaries between human and technological decision-making are blurred. As Law (1992) and Latour (2005) suggest, actor-networks are always provisional; they require continuous work to align interests and stabilize interactions.

Another key mechanism in ANT is translation, the process by which actors redefine, align, and enroll others into their networks. Translation involves four moments: problematization, interessement, enrolment, and mobilization (Callon, 1986). In the context of this study, translation can be seen in how the AI system gradually becomes embedded within institutional workflows, gaining legitimacy and influencing outcomes once solely governed by human discretion.

However, ANT has not been without criticism, scholars such as Whittle & Spicer (2008) and Alcadipani & Hassard (2010) have pointed out its limited engagement with enduring

macrostructures such as bureaucracy, ideology, or historical power relations. By maintaining a strong focus on local interactions and treating all actors symmetrically, ANT often sidesteps questions about how broader institutional logics and inequalities shape the capacity of actors to influence networks. As such, ANT is less equipped to explain the persistence of systemic structures such as colonial legacies or legal hierarchies that may condition organizational practices in places like Trinidad and Tobago. To address these concerns, this study integrates ANT with PBS and ventriloquism (Cooren, 2010b). While ANT is effective for tracing how AI is mobilized within a network of relationships, PBS brings attention to the recursive and situated nature of practice. Cooren (2010, 2012; Cooren et al., 2013) notion of ventriloquism adds a communicative dimension by showing how agency is voiced, delegated, or attributed through discourse and interaction, technologies, policies, and procedures speak through human actors, becoming present and consequential in communicative exchanges. Thus, while ANT helps map the associations that enable AI to act within the system, and PBS reveals how these actions are embedded in ongoing practices, ventriloquism highlights how these heterogeneous agencies are made audible, negotiated, and legitimized through talk and text in everyday organizational life.

This combined framework ensures that the analysis remains attentive to both the daily operational level interactions and the macro-level structures that co-produce organizational outcomes. By acknowledging both the strengths and limitations of ANT, the study offers a nuanced account of how AI systems do not simply automate decisions but are themselves sites of negotiation, tension, and organizational change.

3.3.4 Ventriloquism

This study draws on Cooren's concept of ventriloquism as a communicative complement to PBS and ANT, ventriloquism is used here as an analytical stance that focuses on how agency

is distributed, voiced, and made consequential in interaction. Cooren (2010) proposes that communication should be understood as a site where action and agency are shared among humans and non-humans. Speaking, in this view, is not an exclusively human activity but an exchange in which actors lend their voice to material, institutional, or conceptual figures that, in turn, shape what can be said or done. Later, Cooren (2020) extends this idea, emphasizing that beings, human or otherwise, are made to "say and do things through what we say and do, and that make us say and do things in various situations" (p. 177).

Communication is seen as both performative and distributive. Individuals do not simply express personal intent; they animate other figures, such as systems, regulations, or values, that acquire presence and authority through discourse. For example, when an officer states, "the system has alerted me that your license should be disqualified," the AI system is ventriloquized as an authoritative figure that speaks through the officer and determines or constrains the available courses of action. In this moment, the officer is not merely using the system; they are animating it as a source of legitimacy, shifting accountability away from personal discretion and toward the technology.

The human actor speaks through the system, and simultaneously the system speaks through the human. Here ventriloquism does more than describe speech. It highlights how authority crystallizes in communicative exchange, making the AI not a passive tool but a participant in the decision. This process aligns with Cooren & Bencherki (2010) notion of the possessive constitution of organization, where organizational members speak not only for themselves but also on behalf of the artefacts, documents, and rules that authorize their speech.

Ventriloquism complements both ANT and PBS, while ANT enables the tracing of associations between human and non-human actants, ventriloquism reveals how those

associations are voiced, negotiated, and stabilized through communication. Similarly, where PBS emphasizes the situated and recursive nature of practice, ventriloquism demonstrates how these practices are communicatively enacted, how discursive acts bring material and institutional elements into being. As Cooren (2012) argues, communication does not merely reflect organizational structures; it is the very process through which organizing happens. This allows an analysis of how AI systems, legislation, and organizational policy are not external to practice but constitutive of it.

Drawing from Bakhtin's notion of dialogism, Cooren & Sandler (2014) describe ventriloquism as a recognition that "the world we live in is a speaking and personified world; a world that comes to speak through us because we make it speak in a specific way" (p. 225). This reframing shifts the analytical question from who speaks to what speaks in organizational interaction. It enables the analyst or researcher to trace how authority, responsibility, and legitimacy circulate across human and non-human actors, and how institutional realities are constituted through those exchanges. This analytical sensitivity aligns with the Cooren & Bencherki (2010) claim that organizational authority emerges when actors successfully position what they say as also being said by other figures that lend weight to their words. Authority thus stems not only from hierarchical position but from the ability to animate multiple voices that legitimize a stance.

In applying this to AI-supported decision-making, ventriloquism enables us to see how human agents and technological systems co-produce decisions through chains of representation and delegation. When a member of the organization justifies an action through system output, both the staff and the system participate in enacting the decision's legitimacy. This view reframes

decision-making as a communicative accomplishment distributed across material and symbolic actors.

Finally, the ventriloquial lens also reveals its own limitation. By emphasizing micro-interactional processes, it risks underplaying broader structural conditions, legal regimes, historical inequalities, and bureaucratic hierarchies that shape which figures are heard or silenced. To address this, the present study situates ventriloquism within a PBS approach, using insights from Feldman & Orlikowski (2011) and Actor-Network Theory (Latour, 2005) to trace how these communicative performances are stabilized across sociomaterial assemblages. Together, these frameworks provide a robust way to analyze how authority and accountability are distributed, enacted, and institutionalized.

3.4 Synthesis and Conceptual Framework

This final section synthesizes the theoretical concepts explored in this chapter into an integrated conceptual framework that will guide the empirical analysis (see Figure 2).

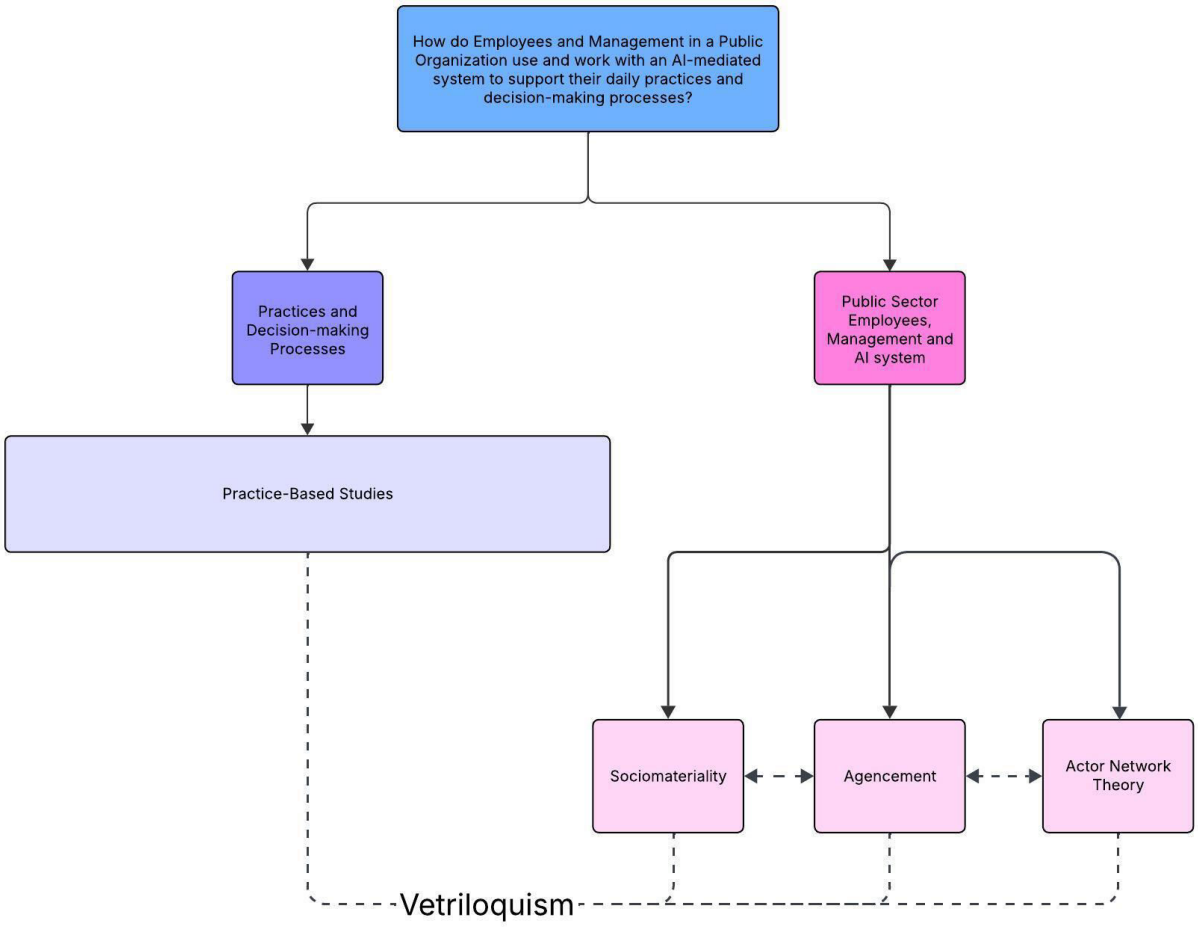


Figure 2. *Map of Conceptual Framework. The conceptual framework is grounded in Practice-Based Studies. Solid arrows indicate theoretical derivation from the research question and its two focal dimensions (practices/decision-making and public sector actors). Dashed arrows indicate complementary relationships among Sociomateriality, Agencement, and Actor-Network Theory, each offering a distinct analytical lens on AI-mediated decision-making. Ventriloquism (dashed border) spans all concepts, filling gaps in discourse and legitimation left by the other perspectives.*

Each concept: sociomateriality, agencement, actor-network theory, and communicative constitution, offers a distinctive lens, yet together they establish decision-making as a relational, situated, and distributed practice.

The conceptual framework adopted in this study builds on a multi-perspective approach that conceives of decision-making as an emergent, sociomaterial, and discursive accomplishment. To make sense of how AI-mediated decisions unfold in organizational settings, the study integrates interrelated perspectives: sociomateriality, agencement, ANT, and

ventriloquism, each contributing specific analytical insights and compensating for the limitations of the others. Together, these perspectives align with a practice-based epistemology that views knowledge, technology, and communication as dynamically interwoven in the production of organizational life.

Sociomateriality provides the grounding for understanding how AI is not external to decision-making but entangled in the very fabric of practice. As Orlikowski and Scott (2008) emphasize, organizational practices are inherently sociomaterially constituted through the ongoing interplay between people, technologies, discourses, and norms. This approach dispenses with a simple human-versus-machine dichotomous approach and invites inquiry into how AI systems become embedded in the routine enactment of authority and judgment.

Agencement (Callon & Law, 2005), refines this understanding by focusing on the dynamic arrangements or configurations of heterogeneous elements that coalesce to produce decisions. Rather than being linear or predetermined, decision-making is seen here as a contingent and provisional achievement that emerges from the assembling and stabilizing of professional roles, algorithms, procedural codes, and institutional expectations. This perspective directs analytical attention to how such elements are brought together, maintained, or reconfigured over time.

ANT contributes a methodological imperative, to follow the actors, both human and non-human, across the organizational terrain and trace how agency is distributed, mobilized, or creates tension. ANT avoids privileging one type of actor over another and highlights how authority is the outcome of associations rather than pre-given hierarchies, however, ANT has been critiqued for its limited attention to discourse, power, and institutional history (Whittle &

Spicer, 2008; Alcadipani & Hassard, 2010). It tends to underplay how meanings are negotiated, justified, or contested communicatively.

This is where Cooren's (2010, 2012) concept of ventriloquism becomes essential, ventriloquism introduces a communicative lens that explicitly addresses how authority and agency are discursively constructed by allowing non-human figures, such as AI systems, regulations, or policy documents, to speak through organizational interactions. Ventriloquism illuminates these moments where human actors animate, or are animated by, non-human figures in ways that shape organizational outcomes and accountability.

Importantly, ventriloquism fills critical gaps left by the other approaches. Where sociomateriality and agencement emphasize relationality and enactment, they often remain silent on how actors justify and legitimize decisions. ANT's strength lies in tracing associations, but it rarely accounts for how meaning and power are communicatively negotiated. Ventriloquism complements these perspectives by examining how different figures are ventriloquized depending on actors' positions, the stakes involved, and the organizational setting. It also makes it possible to analyze which figures are cited, how they are positioned, and how they interact discursively to produce authority.

These perspectives form a coherent practice-based framework for analyzing AI-mediated decision-making as a complex, situated, and discursive practice. Collectively, they shift the analysis from what individuals decide, to how decisions are accomplished through socio-technical and communicative arrangements.

The theorists underpinning these perspectives further reinforce this orientation. Gherardi's work established the framework for how knowledge is enacted, embodied, and sustained within practices, emphasizing the experiential and relational dimensions

of knowing-in-practice. Orlikowski and Nicolini direct attention to the situated enactment of technology and the configurations that effect organizational decision decision-making, positioning technology as constitutive rather than external to practice. Cooren's ventriloquial approach, in turn, demonstrates how agency and authority are constituted through discourse, showing how both human and non-human figures acquire voice and presence in communicative events.

Together, these theorists offer a comprehensive and multi-layered lens through which to interrogate how AI supported decision-making is embedded in situated activities, shapes organizational processes, and is communicatively constructed. Their work provides conceptual depth by (i) framing practice as emergent, relational, and sociomaterial; and methodological guidance by (ii) offering strategies to trace how these dynamics unfold empirically (see Table 4)

Table 4. *Conceptual Framework Applied*

Theoretical Construct	**Core Premise**	**Indicators in the Data**	**Analysis**
Practice-Based Studies (overarching lens)	Decision-making is an emergent, situated practice shaped by routines, embodied actions, tools, norms, and local improvisations.	Repeated work patterns, situated decision-making, informal rules, adaptations, handling of system outputs, coordination practices.	How work is actually done, not how policy imagines it should be done. Provides the grounding layer for the other constructs.
Sociomateriality	Human and material elements are inseparable and mutually constitutive in action.	Screen interactions, data entries, automated prompts, timestamps, audit trails.	How decisions become possible through entanglement rather than individual cognition.
Agencement (assemblage)	Action emerges when heterogeneous elements align into a functional arrangement.	Actor configurations, rules + system + policy intersections, temporary coordination of resources.	How decision pathways form and stabilize to enable an outcome.
Actor-Network Theory (ANT)	Agency circulates across human and non-human actors as a distributed effect.	Shifts in authority, enrolment of new actors, system constraints, escalation/deferral patterns.	Who/what acts in decision episodes, and how power moves through a network.
Ventriloquism	Actors speak through figures to justify or shift responsibility for decisions.	References to policy/system/law ("the system says…", "the Act requires…").	How authority speaks in interactions and how legitimacy is produced in talk.

Ultimately, this integrated framework enables the study to explore decision-making as a practice-based, communicative, and materially entangled process. It provides the analytical tools to examine how AI systems are mobilized, legitimized, and are the sources of tension in public-sector contexts, how authority and accountability are distributed across human and technological actors, and how organizational decisions are continuously performed into being.

3.5 Chapter Summary

This chapter sought to develop a composite theoretical framework for analyzing AI mediated decision-making within public sector organizations by drawing together interrelated perspectives: PBS, sociomateriality, ANT, and ventriloquism, each contributing distinct conceptual tools while addressing the limitations of the others, forming a robust and flexible lens for understanding the empirical realities associated with the implementation and usage of an AI system in a public organization.

The chapter began by situating the study within a Practice-Based Study framework, emphasizing that decision-making is not an isolated cognitive event but a situated, embodied, and distributed activity. The sociomaterial approach underscored how AI systems are not mere tools used in decision-making but are co-constitutive of decisions themselves, entangled in professional norms, institutional logics, and technical affordances. The notion of agencement deepened this understanding by highlighting how heterogeneous elements, legal codes, interfaces, officers, and algorithms, assemble into temporarily stable configurations that give shape to decision-making processes.

ANT provided the methodological imperative to follow the actors and trace how agency and authority emerge across human and non-human networks. Yet, recognizing ANT's tendency to underemphasize enduring structures of power and meaning, the framework incorporated the

concept of ventriloquism. This communicative lens foregrounds how actors invoke various figures, such as policies, systems, and procedures, to legitimize decisions, distribute accountability, and perform organizational authority during interactions.

Together, these perspectives support a multidimensional inquiry into how AI systems participate in the reconfiguration of governance, legitimacy, and discretion in public sector administration.

4 Methodology

This chapter presents the methodological approach employed in this thesis, which seeks to understand the everyday practices surrounding AI-supported decision-making in a public sector organization. The chapter begins by situating the research within a socioconstructionist (social constructionist) paradigm, outlining its epistemological assumptions and implications for methodology. It then provides a detailed description of the empirical context, the organizational ethnographic approach adopted, sampling strategies, data collection instruments, data analysis procedures, and methodological limitations. The chapter concludes with a summary linking the methodology to the overall research aims.

4.1 Epistemological Position

This study adopts a social constructionist epistemology to explore how AI systems are embedded in and enacted through the communicative and material practices of public organizations. At its core, this position holds that knowledge is not discovered but co-constructed through interaction, discourse, and practice. Organizational realities, decisions, technologies, and authority, do not exist independently of the ways they are interpreted, communicated, and performed. Within this study, social constructionism provides the epistemological foundation, while sociomateriality, practice-based studies, actor-network theory, and ventriloquism serve as theoretical and analytical lenses that guide the interpretation of empirical material.

Social constructionism, as articulated by Burr & Dick (2017), Cunliffe (2003, 2008), and Cassell et al. (2018), emphasize the relational and discursive processes through which shared realities are created. In organizational communication, social constructionism serves as a foundational paradigm for interpretive inquiry (Fairhurst & Putnam, 2019; Putnam et al., 2005). Scholars in this tradition reject the notion of organizations as static structures, instead

viewing them as communicatively constituted phenomena, that is, realities that emerge through the ongoing interplay of discourse, materiality, and practice. Fairhurst and Putnam (2018) argue that organizational discourse "positions people in relation to one another, and these positionings form patterned redundancies in social interaction that often get institutionalized into organizational rules, roles, and systems" (p. 921). In a similar vein, Putnam et al. (2005) emphasize that discourse constructs, constrains, and enables organizational life, shaping "what can be said, by whom, and with what authority." Together, these scholars reinforce the constructionist claim that discourse does not merely reflect organizational realities, it constitutes them, a view central to this study's examination of AI-mediated decision-making.

This constructionist orientation aligns closely with Weick's (1995) sensemaking perspective, which posits that events become meaningful only through collective interpretation. In contexts of technological mediation and ambiguity, such as AI-supported decision-making, meaning is continually negotiated as actors interpret and reframe algorithmic outputs in relation to institutional norms and accountability structures. As Sutcliffe, Weick & Obstfeld (2006) observe, organizational sensemaking involves the "ongoing retrospective development of plausible images that rationalize what people are doing." (p.409) Applied here, system recommendations or alerts gain authority not through technical superiority alone, but through how they are discursively framed and legitimized by organizational actors.

A social constructionist epistemology also emphasizes reflexivity and situated knowledge. Referencing Cunliffe (2003), the researcher is not a detached observer but a co-participant in the meaning-making process, recognizing that interpretations are situated, partial, and dialogically produced. In this study, the researcher's engagement with participants, texts, and

practices is thus understood as part of the communicative process through which knowledge about AI-supported decisions is co-constructed.

While social constructionism has been critiqued for its tendency to privilege discourse over materiality or structural power (T. J. Fenwick et al., 2011), this study addresses such limitations by integrating sociomaterial and practice-based perspectives that bring into focus the entanglement of the discursive and the material (T. Fenwick & Edwards, 2013; Orlikowski, 2007). These perspectives emphasize that technologies are not passive instruments but active participants in organizing, shaping and being shaped through the practices that give them meaning.

Furthermore, constructionism provides an analytical lens for examining authority, legitimacy, and discretion, central concerns in public-sector decision-making. As Cooren (2010) and Bencherki and Cooren (2011) illustrate, non-human figures such as laws, policies, and AI outputs gain agency when they are ventriloquized in discourse i.e., when human actors invoke them as speaking entities that legitimize decisions. This understanding allows the study to explore how authority is distributed across humans and technologies, not as a pre-given hierarchy but as a discursive accomplishment negotiated in situated contexts.

In sum, this study is grounded in a social constructionist epistemology that treats organizations as communicative achievements, technologies as relationally enacted, and knowledge as emergent from social interaction. This stance supports an inquiry into how AI-mediated decision-making practices are shaped, negotiated, and rendered authoritative within public organizations. It also provides the reflexive and critical tools necessary to examine how meanings are produced, resisted, and stabilized, especially in institutional contexts where accountability, governance, and discretion are continually at stake.

Adopting a social constructionist epistemology entails a commitment to an approach that foregrounds the co-creation of meaning, contextual specificity, and the fluid, emergent nature of knowledge. Within this view, reality is not discovered but constructed through interaction, language, practices, and the material conditions that scaffold them. Consequently, methodological choices must be congruent with this perspective by emphasizing interpretive, flexible, and reflexive forms of inquiry (Camargo-Borges & Rasera, 2013; Cunliffe, 2008; Gergen & Gergen, 2015).

From this standpoint, organizational ethnography emerges as an especially suitable methodological strategy. Unlike positivist approaches that seek objectivity or generalizability, ethnography, particularly within a constructionist paradigm, offers a way to engage deeply with the situated, relational, and performative dynamics of organizational life. It allows for immersion in the empirical context and attends to the ways in which meaning is negotiated and re-negotiated through communicative performances, social practices, and material-discursive entanglements (Alvesson, 2003; Ybema et al., 2009). This approach aligns with the study's focus on AI-supported decision-making, where practices are not fixed sequences, but evolving assemblages shaped by both human and algorithmic actors.

Moreover, a reflexive thematic analysis, as developed by Braun and Clarke (2006, 2019), is employed in this study to analyse the empirical material. Unlike codebook approaches, reflexive thematic analysis is underpinned by a constructionist orientation, wherein themes are not passively discovered in the data but actively constructed by the researcher through deep engagement, interpretation, and reflexivity. This analytic process acknowledges the role of the researcher in shaping meaning and emphasizes that analysis is always situated and perspectival (Braun & Clarke, 2021). The focus is not solely on what participants say but how their discourse

enacts particular realities, positions agency, and brings authority to organizational action, especially in contexts where technology such as AI is invoked.

The reflexive thematic approach complements the ethnographic method by offering a flexible, non-linear way of identifying patterns across a diverse dataset that includes interviews, observations, and institutional texts. Patterns are not treated as objective truths but as contextually embedded meanings that reflect broader discursive, material, and institutional structures. In this way, analysis itself becomes a site of construction, where meaning is co-produced by the researcher's interpretive stance, theoretical commitments, and ethical reflexivity (Finlay, 2002; Pillow, 2003).

The organizational ethnography supported by the reflexive thematic analysis, provide a coherent methodological scaffold for exploring how AI-based decision-making is constituted within the practices, discourses, and power relations of a public sector organization. This combination allows for a nuanced analysis of how authority, accountability, and discretion are performed, and how non-human actors such as AI systems become entangled in the organizational communication of decisions.

4.2 Case Selection and Context

The empirical context of this study is the Transport Division of Trinidad and Tobago and its integration and implementation of the UTurn system as part of the process of digitizing its operations. Understanding this context is crucial to situating the research within its organizational, legal, and technological environment, and imperative to unpacking how practices of decision-making and AI-use are shaped by the unique contexts of public sector organizations.

In recent years, the Transport Division has embarked on an ambitious digital transformation programme to improve public service delivery and administrative efficiency

(Altheide et al., 2008; Trundle & Phillips, 2025), a central pillar of this transformation is the UTurn system. This empirical context is critical for examining how systems such as the UTurn become embedded within public sector work practices, reconfiguring decision-making processes and institutional accountability structures. Ergo, the Transport Division provides a rich site to explore how technology mediates the relations between law, policy, decision-making, and citizen interactions.

4.2.1 Rationale

The selection of the Transport Division as the case for this research was guided by both theoretical and practical considerations central to the study's objectives. From a theoretical perspective, the Transport Division represents a highly relevant site for investigating AI mediated decision-making within the public sector. Its operations inherently involve complex decision processes at the intersection of legislation, organizational routines, and technological systems, thus providing excellent context for exploring how AI implementation in an organization reconfigures practices.

Practically, the Transport Division's implementation of the UTurn system offers a clear instance of public sector digital transformation, aimed at increasing transparency, efficiency, and accountability. This system has been integrated into the workflows of multiple levels of the organization, including Licensing Officers, TECU staff, and senior managers, who interact with its outputs and interfaces to make decisions that carry legal and operational implications. Studying this context therefore enables an examination of AI embedded within daily routines and the evolution of processes that come with the implementation of a new system.

Finally, access considerations influenced the choice of this case. The researcher's established professional networks within the public sector facilitated entry, enabling in-depth

ethnographic engagement through observations, interviews, and shadowing. This accessibility, combined with the relevance and richness of the site, ensures that the Transport Division provides both the depth and breadth required to meet the analytical objectives of this doctoral thesis.

4.2.2 The Transport Division, Ministry of Works & Transport

The Transport Division of Trinidad and Tobago, which operates under the Ministry of Works and Transport (MOWT), is governed by the *Motor Vehicles and Road Traffic Act (Chap. 48:50)* that provides the legislative mandate for all activities related to vehicle and driver regulation within the country.

The Transport Division is tasked with a broad range of responsibilities central to national transportation governance. It issues learner's permits, provisional licences, and full driver's licences, conducts both theory and practical driving examinations, and maintains the National Driver's Register. This function is critical in ensuring that all drivers on Trinidad and Tobago's roads meet standardized competency and safety requirements.

The Transport Division also plays a central role in traffic compliance and enforcement, it works collaboratively with the Trinidad and Tobago Police Service (TTPS) to enforce traffic regulations and violations and is responsible for enforcing vehicle roadworthiness standards, such as ensuring vehicles pass inspections and meet emission requirements.

Aligned with national digital transformation priorities, the Transport Division has embarked on the digitalization of its services, particularly the UTurn system, which was the subject of the study. Through the MOWT Licensing Portal, an increasing number of services have been moved online, including licence renewals and duplicate permit applications. Plans for

the implementation of biometric driver's licences are also underway, signifying a continued push towards enhancing the security and efficiency of identification and licensing systems.

Overall, the Transport Division represents a complex and dynamic organizational setting, interfacing with technological systems, legislative frameworks, and citizen interactions in ways that are directly relevant to this study's focus on AI-enabled decision-making practices in the public sector.

4.2.3 The UTurn System

The UTurn system represents a major technological and organizational innovation within Trinidad and Tobago's Road traffic management infrastructure. It was formalized through the *Motor Vehicles and Road Traffic Act (Chap. 48:50) Act 9 of 2017*, which collectively provide the legislative foundation for electronic ticketing and the creation of a centralized database to manage traffic violations. This legislative framework ensures that all operational aspects of the UTurn, including automated ticketing, payment processing, and enforcement protocols, are anchored within national law.

The UTurn System as seen in Figure 3, integrates two interconnected technological components: an ICT platform that manages user access, records, and inter-agency connectivity, and an AI automation and data-processing software that enables real-time synchronization across all connected entities. Together, these components ensure that every transaction, whether a Licensing Officer issues a ticket or a motorist pays a fine at TTPost, is automatically updated throughout the system. This real-time data exchange allows the Judiciary, Trinidad and Tobago Police Service, Licensing Authority, and Traffic Enforcement Centre Unit (TECU) to access the most current information simultaneously, reinforcing transparency, accuracy, and efficiency in traffic law enforcement and decision-making.

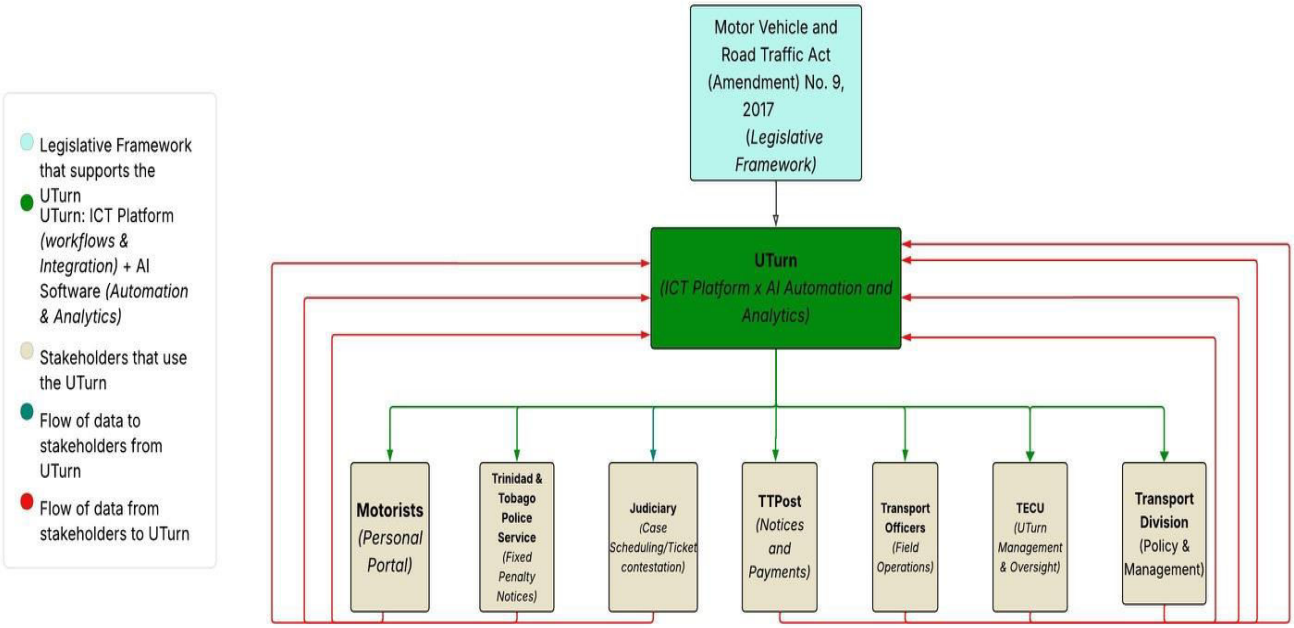


Figure 3. *The UTurn System*

The system was introduced with four key objectives: (i) digitization of traffic ticketing processes and eliminate manual paper tickets, (ii) reduction of opportunities for police corruption such as bribery for traffic offenses, (iii) improvement of motorist compliance through automated reminders and penalties, and (iv) integration enforcement data with other national systems, including the Licensing Division, Transport Board, and Judiciary. In effect, the UTurn is not only a technological intervention but also a legislative and policy reform aimed at enhancing transparency, accountability, and operational efficiency within public traffic enforcement and the wider public service.

The UTurn system works by enabling violation detection through two main modalities: (i) e-ticketing by police officers using handheld devices connected to the central database, and (ii) automated capture of offenses via speed cameras and red-light cameras. Notification and penalty systems are automated, with offenders receiving SMS or email alerts detailing their violations and applicable fines, and with escalating penalties for repeat offenses. Payment and

dispute resolution processes are also digitized, allowing fines to be paid online, or via the postal company (TTPOST), while disputes must be filed within 14 days via the UTurn online portal or directly through the courts.

By digitizing work processes and creating real-time links between enforcement officers, the TECU staff, the Licensing Division, and the Judiciary, the UTurn reconfigures the flow of information, accountability, and decision-making.

4.3 Research Design and Fieldwork

Organizational ethnography is a qualitative research approach that seeks to understand the lived realities of organizational members by immersing the researcher within their environment (Ybema et al., 2009). This methodology prioritises rich, contextualised understanding over generalisation, aiming to reveal how organizational life is constructed, maintained, and transformed through everyday practices.

Ethnography is particularly well-suited for this study because it aligns with the socioconstructionist epistemological stance, focusing on how meaning, knowledge, and practices are co-constructed within specific social contexts. In the context of this thesis, organizational ethnography provides the methodological tools to examine how AI systems such as the UTurn become embedded in work practices and influenced decision-making processes within the Transport Division.

Mirhosseini (2020) posited, “Perhaps the most important feature of qualitative data is contextual situatedness. The evidence on which qualitative researchers rely in addressing their research concerns should necessarily reflect the essence of phenomena as they are constructed in their actual setting and based on participants’ perspectives.” (p.61). Ergo, the organizational ethnography approach extended to engagement in the field, enabling the researcher to observe

not only what people say they do, but what they truly do in practice. As Van Maanen (2011) asserts, ethnography seeks to reveal the backstage of organizational life, the informal practices, improvisations, and sense-making processes that are often invisible in official documents or interviews alone (p.96).

This approach was also chosen for its ability to trace practices and understand how decisions, policies, and technologies are enacted over time and across organizational levels (Kwon et al., 2009; Van Hulst et al., 2017). Using multiple data collection tools that included direct observation (Kawulich, 2005; Mirhosseini, 2020; Sandiford, 2015); shadowing (Gill, 2011; McDonald, 2018; McDonald & Simpson, 2014; Quinlan, 2008); document analysis (Altheide et al., 2008; Trundle & Phillips, 2025); and ethnographic interviews (De Fina, 2019; Heyl, 2001; Westby C et al., 2003), the study systematically investigated how the UTurn system became part of everyday practices.

Finally, organisational ethnography provided the analytical sensitivity to examine contradictions, tensions, and adaptations arising from AI integration (Jayathilaka, 2020; Van Hulst et al., 2017; Ybema & Kamsteeg, 2009). It highlights the complexity of implementation, highlighting how technologies are interpreted, contested, appropriated, and reconfigured by different actors within their situated contexts (Nicolini, 2009; Ybema et al., 2009). This aligns with the study's overarching aim of understanding decision-making as situated, socio-material practice.

4.3.1 Phases of Data Collection

Fieldwork was conducted between August 2022 and February 2024. Access was formally negotiated through the Transport Commissioner in August 2022, with ethics approval obtained

from the University of Ottawa Research Ethics Board (See Appendix H) and all participants provided informed consent (See consent form Appendix F)

Data collection proceeded in three overlapping phases (Figure 4):

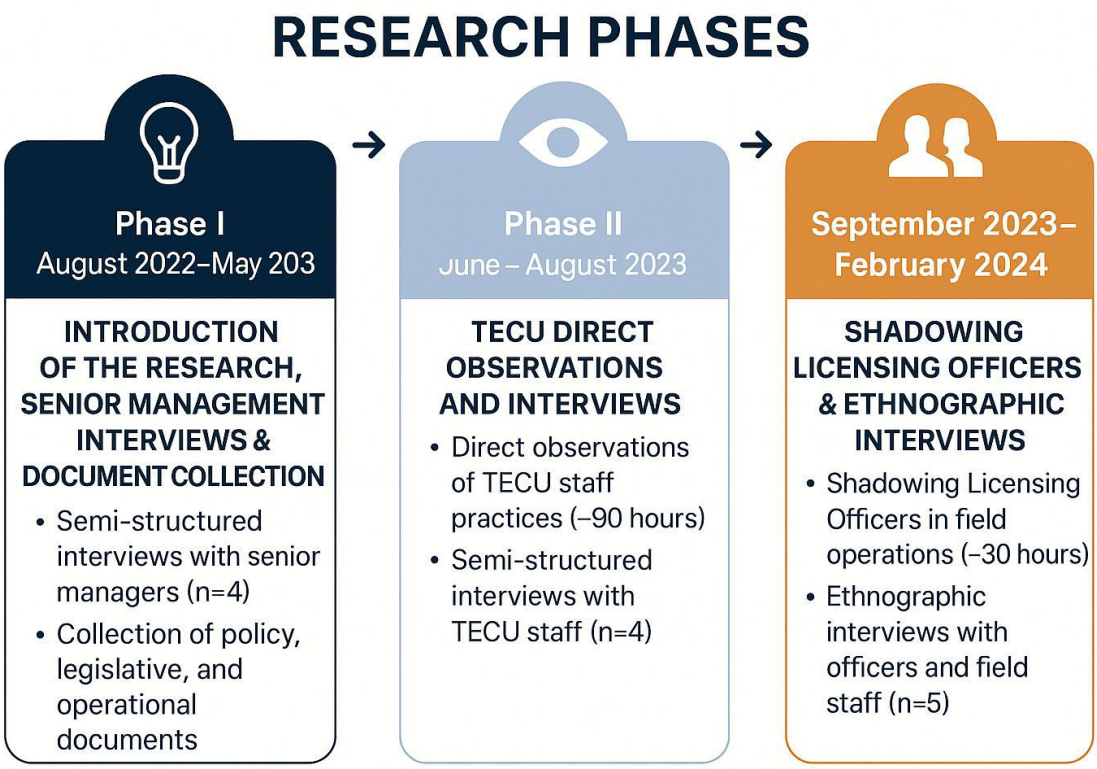


Figure 4. *Data Gathering Timeline*

4.3.2 Triangulation and Reflexivity

Triangulation (Flick, 2004) was achieved through combining interviews, observations, documents, and shadowing data to build a holistic understanding of practices. Reflexivity was maintained through analytic memoing, field diaries, and regular debriefing sessions with my supervisor.

Triangulation was an essential strategy within this organizational ethnography to enhance the credibility, validity, and depth of findings (Carter, 2014; Natow, 2020; Santos et al., 2020) . Methodological triangulation was achieved by combining multiple data collection methods:

semi-structured interviews, direct observations, shadowing, document analysis, and ethnographic interviews, to produce a rich, multi-perspective understanding of how decision-making practices are enacted within the Transport Division. For example, interviews with senior management provided insight into strategic rationales and policy intentions, while observations and shadowing of Licensing Officers and TECU staff illuminated how these policies materialized in daily practices, while also facilitating deep insight into the processes of decision-making in situated contexts that integrated the technology.

Data source triangulation was also utilized by capturing perspectives across hierarchical levels and functional roles, including frontline officers, technical staff, administrators, and managers. This ensured that the analysis did not privilege managerial interpretations but instead accounted for divergent experiences and situated knowledges (Nicolini, 2009; Gherardi, 2019). Furthermore, temporal triangulation was embedded in the data collection design, as fieldwork occurred over multiple months and organizational phases (e.g., document gathering, interviews, followed by shadowing and ethnographic interviews). This temporal spread allowed for observations of both routine stability and situational adaptations, strengthening the reliability of interpretations.

Alongside triangulation, reflexivity was systematically integrated into the research design and practice. Reflexivity here is conceptualized as a multidimensional process involving positionality, intersubjectivity, power dynamics, self-interrogation, and transparency (Finlay, 2002; Hammersley & Atkinson, 2019; Pillow, 2003). Reflexivity was systematically maintained throughout the research process. As a researcher with some professional familiarity with public sector structures, there was the need to continuously interrogate assumptions, positionality, and interpretive frames. Reflexive memos were recorded

after each observation, interview, and analytic session, capturing both analytical insights and reflections on potential biases or influences (see example in Appendix E)

Additionally, reflexivity extended to relational dynamics in the field. Interactions with participants were marked by power asymmetries, particularly given the hierarchical structures of the Transport Division and the enforcement nature of officers' work. Recognizing how the presence of a researcher might influence participant behaviour, especially during shadowing and direct observations, was critical in interpreting data. These reflections informed subsequent interviews, allowing for clarifications and validations of observed practices.

Finally, triangulation and reflexivity were interwoven during analysis, coding and theme development integrated multiple data sources, ensuring that emergent interpretations were grounded across methods.

4.4 Data Collection Instruments

This research employed multiple data collection instruments aligned with the ethnographic approach of the study (Table 5). These instruments were designed to capture the complexity, context, and situated enactments of AI-mediated decision-making practices within the Transport Division and its field operations. Combining interviews, observations, document analysis, and shadowing ensured data triangulation and strengthened the credibility of findings (Patton, 2002). Each instrument was purposefully selected to illuminate different dimensions of use of the UTurn in the organization.

Table 5. *Data Gathering Methods and Details*

Data Gathering Method	**Details**
Interviews (Semi-structured/Ethnographic)	4 Management, 4 TECU staff, 12 field staff (Licensing Officers & UTurn Field Officer)
Observations	~70 hours office, ~20 hours field
Documents	Legislative acts, operational manuals, system-generated documents, communication documents, transcripts of speeches
Photos	~75 pictures
Video	~30 minutes

4.4.1 Semi-Structured Interviews

Semi-structured interviews (Adeoye-Olatunde & Olenik, 2021; Carruthers, 1990; Horton et al., 2004) were conducted primarily with senior management and policy makers to elicit individual interpretations, rationales, and experiences related to AI implementation and integration. This format allowed for structured comparability across interviews while maintaining flexibility to explore emergent themes in participant narratives (Brinkmann, 2018)

Interview guides (see Appendix I) were developed based on the research questions and key concepts from the theoretical framework. Questions explored topics such as organizational objectives, decision-making processes, perceptions of AI authority, tensions, and work reconfigurations. Interviews lasted between 30 and 75 minutes, were conducted face-to-face

where feasible, and audio-recorded with participant consent for verbatim transcription and thematic analysis. (see Appendix K interview guideline)

4.4.2 Document Collection

To complement the ethnographic data, a range of organizational documents was collected to provide institutional, historical, legal, and policy context surrounding the development and implementation of the UTurn system. These documents served multiple purposes: they enabled triangulation with field data; offered insight into how the system and its rationale were officially framed; and helped map the formal discourses, policy intentions, and structural conditions that shape everyday practices and decision-making within the Transport Division and its partner institutions.

Documents were selected based on their relevance to the operation, governance, and communication of the UTurn system, and this included materials that offered insight into policy intent, operational mandates, technological procedures, and public messaging. The documents collected focused on material produced between 2019 and 2024, the period during which the legislative groundwork for the system was established and its full implementation unfolded. This time frame was chosen to capture both pre-implementation, planning and the post rollout operationalization of the UTurn.

The documents collected varied in format and origin and they included:

1. Legislative and policy texts, such as the *Motor Vehicles and Road Traffic Act*, and Cabinet-approved policy frameworks that underpinned the introduction of the UTurn system.
2. Departmental memos and internal reports, outlining procedural changes, technical workflows, and inter-agency collaboration mechanisms.

3. Templates generated by the UTurn system, including standardized notices of suspension, warning letters, and automated court scheduling notifications.
4. Public communication materials**,** such as brochures, press releases, and social media posts, which provided insight into how the system was presented to the public and justified in terms of efficiency, safety, and accountability.

These materials were produced by multiple organizational actors, reflecting the distributed governance of the UTurn system, which included documents from:

1. The Transport Division of the Ministry of Works and Transport**,** which holds primary responsibility for issuing and regulating driver licenses and motor vehicle compliance.
2. The Traffic Enforcement Centre Unit (TECU), a newly created body tasked with the UTurn oversight, monitoring data produced by the system and supporting intra-agency and inter-agency enforcement.
3. The Communications Unit of the Ministry of Works and Transport, which produced public awareness campaigns and engagement materials related to road safety and digital transformation.

The inclusion of these documents enriched the study by enabling a deeper understanding of how the UTurn system was framed institutionally, how it reshaped administrative discourse and workflow expectations, and how it materialized as both a symbolic and functional instrument of governance. This triangulation allowed for a more nuanced analysis of the entanglements between policy, practice, discourse, and digital systems in everyday execution.

4.4.3 Direct Observations and Shadowing

Direct observation (Ciesielska et al., 2018; Kawulich, 2005; Mirhosseini, 2020) played a foundational role in this ethnographic inquiry. Consistent with socioconstructionist and practice-based traditions, this method enabled the researcher to discern how meaning, power, and accountability were constituted in and through the situated enactment of everyday practices. Rather than treating practices as abstract or static, observation provided access to their real-time unfolding, spatial arrangements, and material engagements that together comprised organizational life.

Over approximately 90 hours, observations were conducted across multiple sites, including the Traffic Enforcement Centre Unit and roadside enforcement activities. Field notes documented interactions between Licensing Officers (LOs), the UTurn system, and citizens, capturing how decisions were co-constructed through interactions with the public. These notes were developed into expanded descriptive and analytic accounts within 24 hours of each field session (see Appendix E for sample of field note summary), ensuring reflexive depth (Emerson et al., 2011).

The selection of observation as a method aligns with sociomaterial concerns, specifically, how human and non-human actors jointly shape organizational processes (Orlikowski, 2007). It also allowed for exploration of how discursive practices and material artefacts converge to mediate authority and public interaction, revealing the various dimensions of power and control in AI-supported decision-making.

Shadowing was employed to gain granular insight into embodied practices and situated decision-making in the enforcement of traffic regulations using the UTurn system. This method provided access to lived experiences, situated routines, and the micro-negotiations that occur at the intersection of technology, policy, and public interaction; dimensions essential to

socioconstructionist and ethnomethodological perspectives on organizational life (Czarniawska, 2007; Suchman, 2007)

Licensing Officers and the UTurn Field Officer were shadowed during road exercises, which included road checks and ticketing operations, amounting to over 30 hours of engagement. This method was chosen because it allowed observation of real-time decision-making, including how officers make sense of ambiguous and fluid situations, exercise discretion, and navigate integration of the UTurn system.

Rather than simply documenting what officers do, shadowing was intended to reveal how sense-making and accountability are produced in the moment of action. This aligns with theories of organizational practice that challenge linear models of decision-making, and instead emphasize how meaning is constituted in unfolding, relational, and dialogic encounters (Cooren et al., 2011; Orlikowski, 2000). By remaining close to the action while minimizing disruption, shadowing allowed for tracing the material-discursive practices that render authority visible, contested, or recalibrated in the field.

4.4.4 Ethnographic Interviews

In addition to structured interviews, ethnographic interviews were used to elicit actors' reflexive accounts of system use, meaning-making, and emergent challenges. These informal, in-context conversations, conducted during or following observational episodes, offered insights into participants' interpretations of their roles, interactions with the UTurn system, and the ethical and political tensions they navigated.

Ethnographic interviews are particularly suited to socioconstructionist research because they treat knowledge as co-constructed, situated, and contingent (De Fina, 2019; Gergen & Gergen, 2015; Rinaldo & Guhin, 2019). Unlike survey-based approaches that presuppose fixed

meanings, these interactions allowed respondents to articulate their understandings within the flow of action, thus preserving contextual richness and allowing the researcher to explore implicit norms, values, and institutional logics.

This method also facilitated exploration of key theoretical concerns, such as how actors rationalize accountability structures, engage with technological scripts, and reinterpret organizational imperatives considering lived realities. The interviews were often spontaneous, but in some instances scheduled after observation or shadowing, reflecting the ethnographic commitment to flexibility, reflexivity, and immersion, and served as a crucial supplement to observational and documentary data.

4.5 Sampling Strategy and Participant Profiles

Sampling decisions in qualitative research are crucial to ensure that the data collected adequately addresses the research questions and provides depth of understanding regarding the phenomenon under investigation. This study employed a purposeful sampling strategy (Patton, 2014; Rai & Thapa, 2015; Tongco, 2007) to select participants who could provide rich, relevant, and diverse insights into the everyday practices of the UTurn supported decision-making within the Transport Division.

4.5.1 Sampling Strategy and Criteria

Participants and data sources were selected based on their relevance to the central research aim: how do employees and management in a public organization use and work with an AI-mediated system to support their daily practices and decision-making processes? Purposeful sampling is congruent with both ethnographic and socioconstructionist paradigms, as it seeks information-rich cases that illuminate the phenomenon under investigation rather than aiming for statistical generalizability (Hammersley & Atkinson, 2019; Patton, 2002).

The sampling strategy was multi-level and criterion-based, incorporating three guiding principles:

1. Role-based criteria: Participants were selected to reflect diverse roles directly involved in the practices of traffic enforcement, administration, and system governance. This included:
    i. Senior management responsible for strategic decisions and legislative implementation (e.g., Transport Commissioner, TECU Manager, Communication Manager).
    ii. Mid-level administrative staff managing daily system operations, correspondence generation, and compliance monitoring within TECU.
    iii. Licensing Officers and field enforcement staff operationalizing decisions on the ground through road exercises, ticketing, and public interactions.
2. Process involvement criteria: selection targeted individuals with direct engagement in core processes relevant to the study's focus on decision-making as situated practice. These processes included issuing fixed penalty notices, applying demerit points, conducting field enforcement exercises, and overseeing real-time decision support.
3. Access and ethical considerations: while role and process relevance were primary criteria, feasibility and ethical access shaped final sampling decisions. Voluntary participation, informed consent, and organizational approvals determined which staff and managers could be formally included. Shadowing was limited to officers and TECU staff who provided explicit consent and whose schedules aligned with field observation logistics.

This strategy resulted in a sample that captured multiple vantage points along the organizational hierarchy, both within the Transport Division and in supporting organizations. For

example, interviews with senior management illuminated intended system functions and strategic rationales, while TECU staff provided insights into back-office decision-making practices, and Transport Officers revealed situated decision-making that reflected interactions with the public. The sample included both office-based and field-based staff to reflect the distributed nature of decision-making practices facilitated by the UTurn, which ensured analysis addressed how practices are configured differently across spatial contexts (Suchman, 2007).

While the sample was not representative of the entire Transport Division workforce, its composition was purposefully structured to maximize a broad heuristic significance (Tracy, 2010), capturing the complexity, variability, and relational dynamics reflecting as accurately as possible, the key stakeholders who use the UTurn.

Finally, consistent with ethnographic principles, sampling remained iterative, with early insights guiding subsequent participant selection to probe emerging themes and practice configurations (Busetto et al., 2020; Honigmann, 2003; Kekeya, 2016). This reflexive adaptation of sampling decisions enhanced the depth and theoretical fullness of the analysis.

4.5.2 Participant Groups and Roles

This study involved multiple participant groups strategically selected to capture the multidimensional nature of AI mediated decision-making practices within the Transport Division and related organizational units (Table 6). Participants were categorized based on their formal roles and proximity to the UTurn system's implementation and daily operations.

Table 6. *Summary of Groups and Their Roles*

Group	**Role**
Management	Strategic implementation, policy development and departmental & organizational oversight
TECU Staff	Operational management and administration
Licensing Officers	Enforcement and field operations

First, senior management included executives responsible for strategic planning, legislative integration, and technological decision-making related to the UTurn system. Additionally, these managers were members of the steering committee responsible for the creation of the demerit system that undergirds the UTurn and who were also responsible for the subsequent sourcing and implementation of the technology. Their insights provided contextual understanding of policy objectives, institutional priorities, and managerial interpretations of technology's intended impact.

Second, the Traffic Enforcement Centre Unit (TECU) staff members were critical participants. They are responsible for administering and overseeing the UTurn backend system, generating notices, managing driver sanctions, and maintaining records that directly impact enforcement practices. Their daily interactions with the UTurn system positioned them as central figures in understanding how digital infrastructures shape routine decision-making. The creation of the TECU is directly linked to the implementation of the UTurn, as this department has day to day operational supervision of the system and its processes. The also manage other key elements

of the demerit process, such as driver rehabilitation and provide support to Transport Officers during field exercises.

Third, Transport Officers and the UTurn Field Officer, who operate during field exercises were included. These participants are responsible for issuing fixed penalty notices, verifying driver and vehicle data via the mobile system, and delivering notices of disqualification or suspension. Their embodied, in-situ practices provided rich data to observe how the UTurn is enacted under practical, material constraints when interacting with the citizenry.

4.5.3 Summary Table of Participants

Table 7 summarizes participant groups, number interviewed or observed, and the associated data collection methods. This table exhibits the breadth and depth of the ethnographic engagement across the organization.

Table 7. *Summary of Participants*

Participant Group	**Number Participating**	**Data Source**
Management	4	Semi-structured interviews
TECU Staff	4	Ethnographic interviews, observation
Licensing Officers	12	Shadowing, ethnographic interviews

4.6 Data Analysis

The analysis in this study employed Reflexive Thematic Analysis (RTA) as developed by (Braun & Clarke, 2006, 2012, 2019, 2022, 2023) and was selected for its theoretical flexibility and compatibility with a socioconstructionist epistemology and a practice-based

understanding of organizational life. RTA allows for the systematic identification of patterns of meaning across a qualitative dataset while acknowledging the active, interpretive role of the researcher in theme development.

The foundational articulation of thematic analysis by Braun and Clarke (2006) outlined six core phases of the method and emphasized its accessibility and flexibility for qualitative researchers. In their 2012 work, they deepened this framework by distinguishing between inductive and deductive coding, and between semantic and latent themes, offering more nuanced guidance for researchers engaging with complex epistemological positions.

A significant shift occurred in Braun and Clarke (2019), where they advanced the concept of reflexive thematic analysis, arguing that researchers should not aim for coding reliability or inter-rater agreement, but rather embrace the subjectivity and reflexivity inherent in qualitative interpretation. This moves away from a more positivist orientation marked a clear epistemological commitment to meaning as constructed, fluid, and situated, a stance that aligns with the theoretical underpinnings of this study. Ergo, reflexive thematic analysis views the researcher as a central agent in the analytical process, not a neutral instrument. Rather than "themes emerging" objectively from the data, RTA emphasizes that themes are actively generated through the researcher's theoretical positioning, reflexivity, and interaction with the dataset.

In Braun and Clarke (2022), RTA was explicitly positioned as a non-positivist method of analysis that eschews mechanical coding processes in favor of researcher judgement, contextual sensitivity, and iterative reflexivity. The emphasis is on the interpretive process of generating themes that are conceptually and theoretically informed, rather than emergent from the data alone.

In this study, reflexive thematic analysis was applied to interview transcripts, video transcripts, field notes, pictures and institutional documents. The process focused on identifying discursive patterns, sociomaterial arrangements, and enactments of professional accountability in the context of AI-supported decision-making. Rather than applying a fixed coding frame, analysis was guided by recursive engagement with the data, memo-writing, and theory-informed sense-making, consistent with the reflexive, co-constructive nature of the methodology.

4.6.1 Applying the Reflexive Thematic Analysis (Braun & Clarke)

The foundational six-phase model developed by Braun and Clarke (2006, pp. 87–93) served as the procedural backbone of this analysis. However, the study specifically follows the 2019 "reflexive turn" (Braun & Clarke, 2019), which deepens the epistemological and ontological commitments of thematic analysis by embracing researcher subjectivity, emphasizing flexible code development, and rejecting notions of reliability rooted in positivist traditions. The approach is particularly suitable for ethnographic work situated within sociomaterial and discursive traditions, as it allows for thematic interpretation of both situated practice and meaning making.

RTA was used in this study as an interpretive, iterative, and meaning-making practice aligned with the study's constructionist and sociomaterial orientation. The analysis unfolded through repeated engagement with field materials, interviews, observations, and documents, while acknowledging the decisions, questions, tensions, and theoretical sensitivities. Therefore, there is less focus on reproducing Braun & Clarke's canonical description and more on demonstrating how the analytic process occurred in this research.

To enhance transparency and rigor in the analytic process, the Table 8 summarizes Braun and Clarke's six phases of Reflexive Thematic Analysis and illustrates how each phase was operationalized in this study. Including this table serves two key purposes: first, it moves beyond a generic description of the method by showing the concrete actions taken at each stage; second, it demonstrates alignment between the analytic steps, the research questions, and the theoretical framework. By providing examples of coding decisions and theme development, the table makes the interpretive process explicit and allows readers to trace how raw data were transformed into meaningful themes.

Table 8. *Summary Table- Six Phases of Reflexive Thematic Analysis*

Phase	Description (Braun & Clarke)	Application in This Study	Example
Phase 1: Familiarization	Immersion in the data by reading and re-reading; note initial ideas	Reviewed interview transcripts, observation notes, and documents; wrote reflexive memos	After reading an interview where a TECU officer said, "The system decides when to disqualify," a memo noted: "Authority is being attributed to UTurn—possible ventriloquism."
Phase 2: Generating Initial Codes	Systematically code interesting features across the dataset	Created manual codes for patterns related to decision-making, technology use, and authority	Quote: "We follow what the system says." → Initial code: Delegating authority to system.
Phase 3: Searching for Themes	Collate codes into potential themes; gather relevant data for each theme	Grouped codes under broader categories aligned with research questions and theoretical lenses	Codes like Delegating authority to system, System as law, and Audit trail as control grouped into theme: Redistribution of agency through UTurn.
Phase 4: Reviewing Themes	Check if themes work in relation to coded extracts and the entire dataset	Merged overlapping themes; validated coherence through peer debrief and iterative refinement	See figures 5&6. Peer debriefing informed the reviewing of themes, e.g. from "tensions generated by use of the system" → "Reconfiguration of the interaction with the public"
Phase 5: Defining and Naming Themes	Refine specifics of each theme; generate clear names and definitions	Named themes to reflect sociomaterial practices, legal constraints, and	See figures 5,6 & 7 below to see the refinement of themes over time to reflect evolving thought consistent with

		organizational dynamics	thematic alignment and conceptual framework
Phase 6: Producing the Report	Final analysis and write-up; relate back to research questions and literature	Integrated themes into Results and Discussion; linked findings to PBS, ANT, and ventriloquism concepts	In Results: "UTurn mediates authority by embedding legal scripts into workflows." Linked to ventriloquism in Discussion: "The system 'speaks' through officers' discourse."

In applying these phases, the work of analysis did not progress as a linear checklist. Instead, coding, memo writing, visual mapping, supervisory dialogue, and theoretical reflection moved back and forth as new insights emerged. For example, early codes took on broad themes such as "management" or "observation" (see figure 5) were later reinterpreted through a sociomaterial lens as expressions of redistributed authority between humans and the AI system. These movements illustrate how the phases became lived analytic practices rather than procedural steps.

4.6.1.1 Initial Coding

The process began with familiarization with the data. All interview transcripts, field notes, and observational records were read and re-read to gain a holistic understanding of the material. This phase began with identifying and assigning broad concepts and ideas to the methodology used to gather the data. There was general adherence to the research questions at that point to determine how the data would be coded and used. Sentences, or segments of text that captured significant ideas, events, or practices related to AI use, decision-making, and organizational work practices, corrupt practices, tension and evolution of use of the technology were identified. The process was collaborative as a means of initially identifying what are the major areas of interest and their applicability to the broader questions being asked. This foundational process was subsequently revised in favour of a more streamlined approach;

however, it was the genesis of the analysis and reflected the thinking at the time. Themes that became primary areas of concern, e.g. tension and corruption, were identified but not fully refined at this stage.

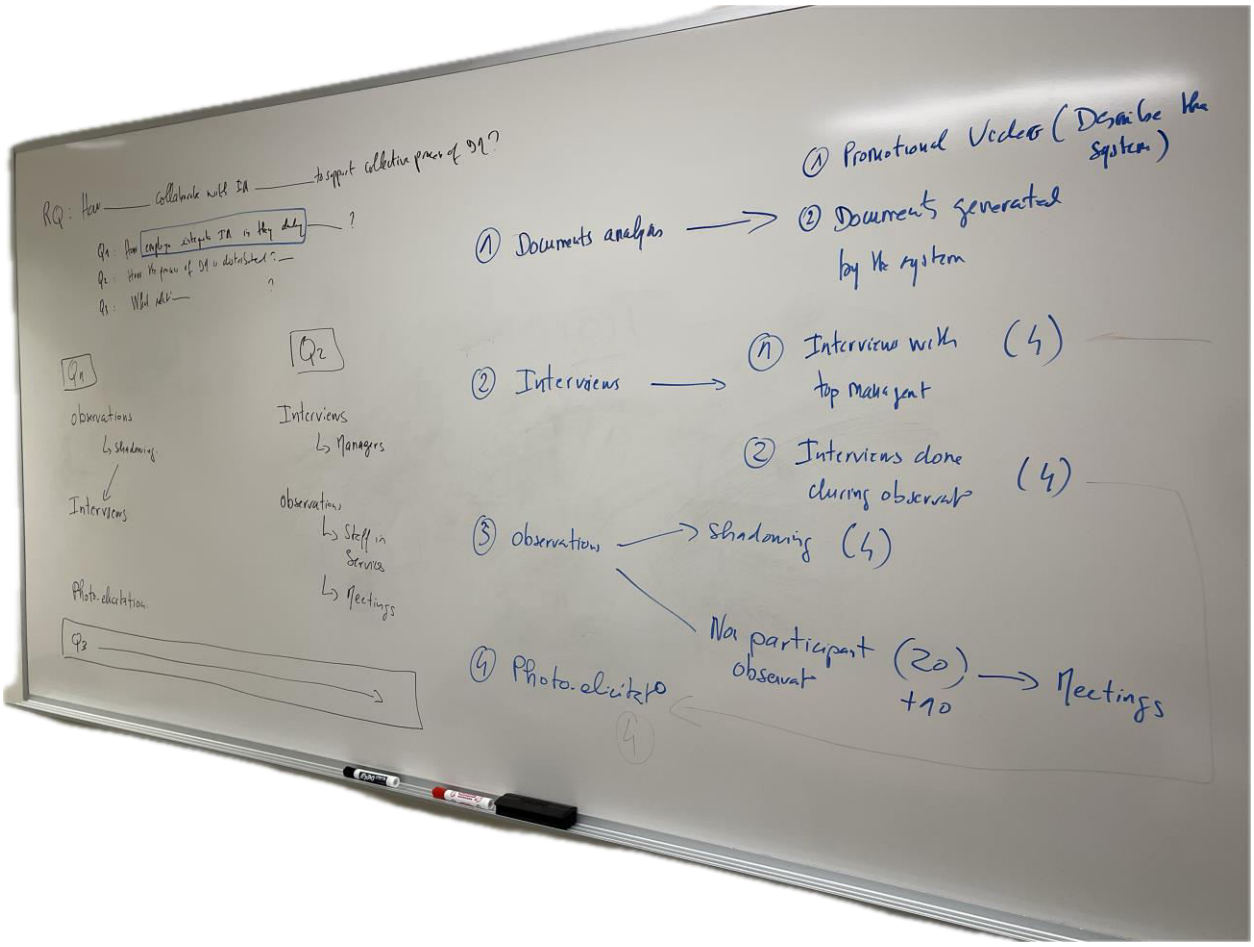


Figure 5. *Initial Coding Exercise*

4.6.1.2 Development of Codes

As coding progressed, initial codes were grouped into broader thematic categories, this stage involved reviewing codes to identify similarities, differences, and conceptual relationships, forming the foundation of the developing analytical framework. The process was not merely technical but deeply interpretive and reflexive, informed by an awareness of how meaning is constructed through the researcher's positionality and theoretical lens.

Reflexive practice was central to this phase, analytic memos were maintained continuously, from initial familiarization through to theme construction, as a means of interrogating interpretive decisions and surfacing epistemological tensions. These memos documented not only emergent ideas and theoretical linkages but also critical reflections on the analytic stance being adopted. For instance, after coding a set of management interviews, I noted: “Am I amplifying the voice of management and projecting their perspective instead of letting the data speak?”

Such reflections were used to recalibrate early coding decisions and to maintain sensitivity to power asymmetries, particularly between management, mid-level staff, and frontline officers. The process of creating memos also served to track shifts in theoretical sensitivity, as early codes grounded in surface-level system interpretations gave way to deeper, latent codes that captured organizational tensions and the sociomaterial entanglements of AI-supported decision-making.

Asking reflexive questions helped ensure that code development did not simply reflect surface regularities but instead engaged with the complexity and contested nature of meaning-making in a public sector context undergoing digital transformation. In this way, the development of codes was not a neutral act of classification, but a situated, iterative, and theory-informed practice that maintained alignment with the broader epistemological commitments of the study (see Figures 6 &7).

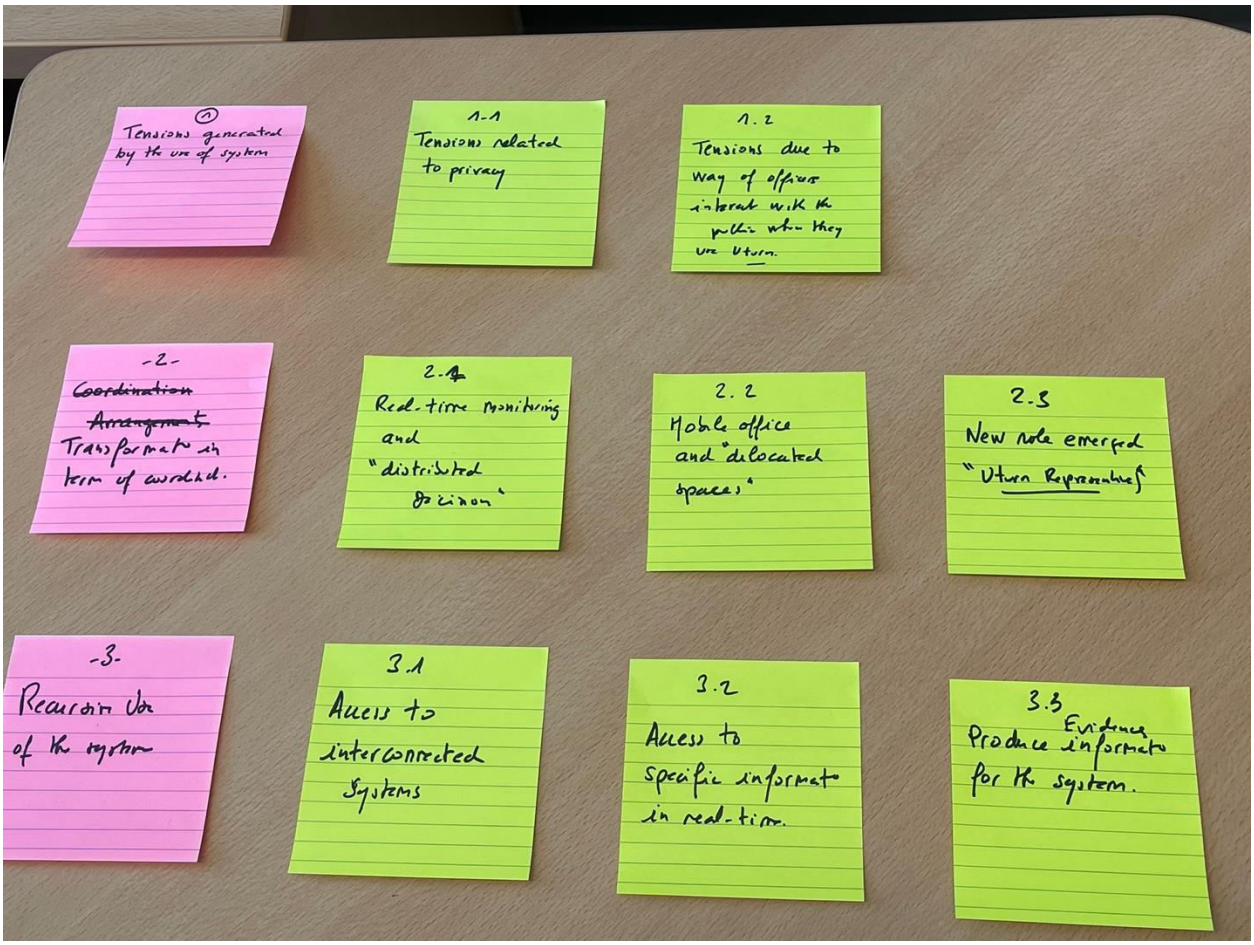


Figure 6. *Development of Codes*

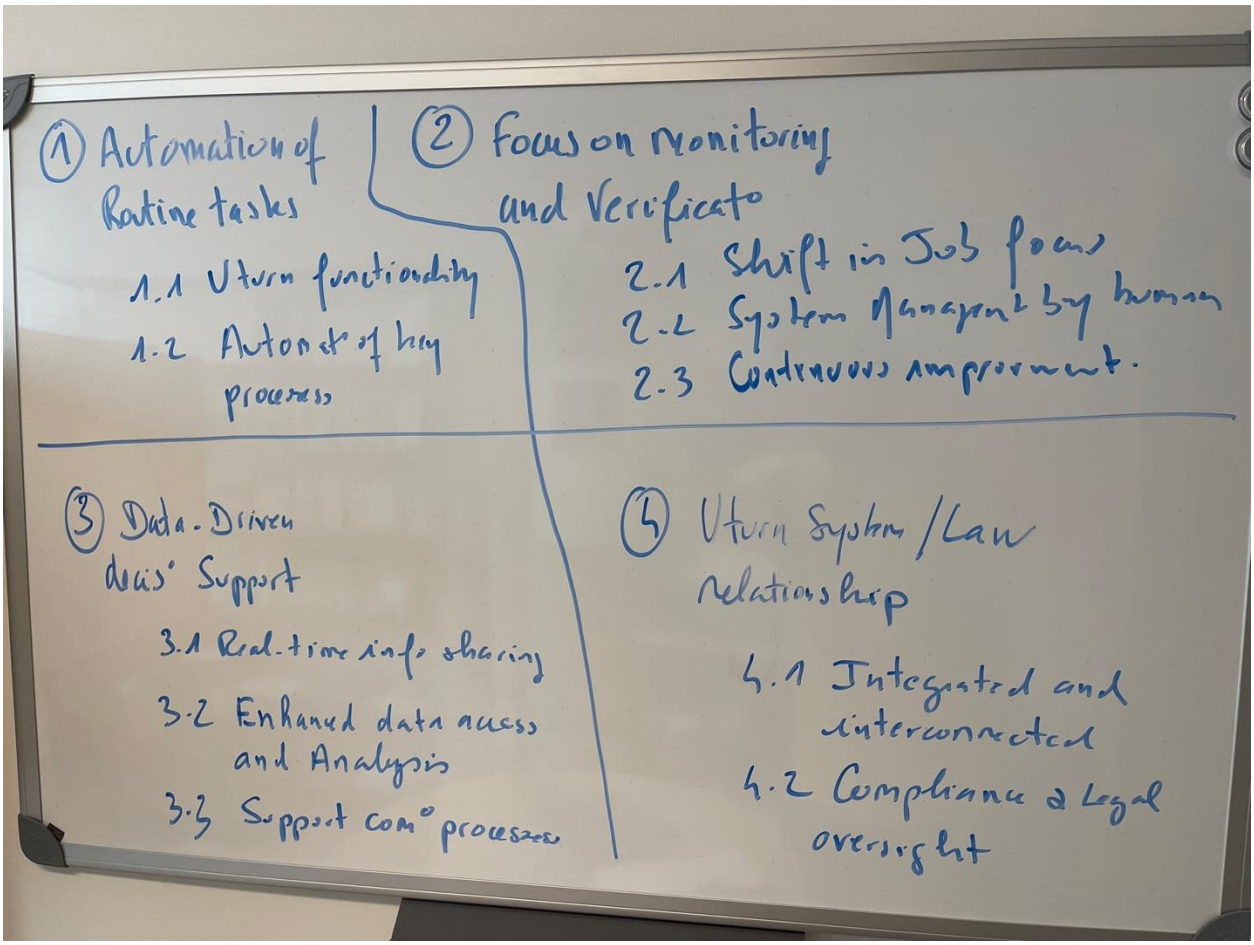


Figure 7. *Development of Codes*

4.6.1.3 Iterative Refinement

Throughout the analysis, coding was approached as an iterative and reflexive process, where initial codes and categories were revisited and refined as new insights emerged. This flexibility allowed the coding framework to evolve in response to deeper understandings developed through continuous engagement with the data, analytic memos, and supervisory feedback.

Theoretical commitments to sociomateriality (Orlikowski, 2007) and practice-based studies (Gherardi, 2012; Nicolini, 2013) explicitly informed how codes were interpreted and how themes were ultimately constructed. For instance, early in the analysis, field notes describing Transport Officers' interactions with the UTurn interface were initially coded as "technical

system use" and "workflow adjustments." However, through a practice-based lens, these were reconceptualized as part of a broader theme: "Interweaving and Recursive Use of AI-Driven Systems." This shift was guided by Nicolini's (2012) emphasis on how technologies are not merely used but become entangled in practice through ongoing enactment and improvisation.

Similarly, the theme "Data driven Decision-Making" emerged from fragments that included references to "the stats generated by the system" or "the system says," or "he noted that all the information operates in real time". Rather than treating these as isolated quotes about the UTurn's entanglement with micro decisions taken during practice, they were re-coded and grouped through the lens of sociomaterial theory, which treats technology as an agentive actor that participates in organizational processes. This lens highlighted the blurred boundaries between human discretion and system suggestion, a framing that was critical to understand how authority is configured.

Thus, theoretical framing did not serve as a post hoc justification but was actively woven into the analytic process. Iterative refinement was guided by an ongoing dialogue between the empirical material and the study's theoretical framework, ensuring that emergent themes were not only grounded in the data but also aligned with the epistemological and ontological commitments of the research (Figures 8, 9 & 10).

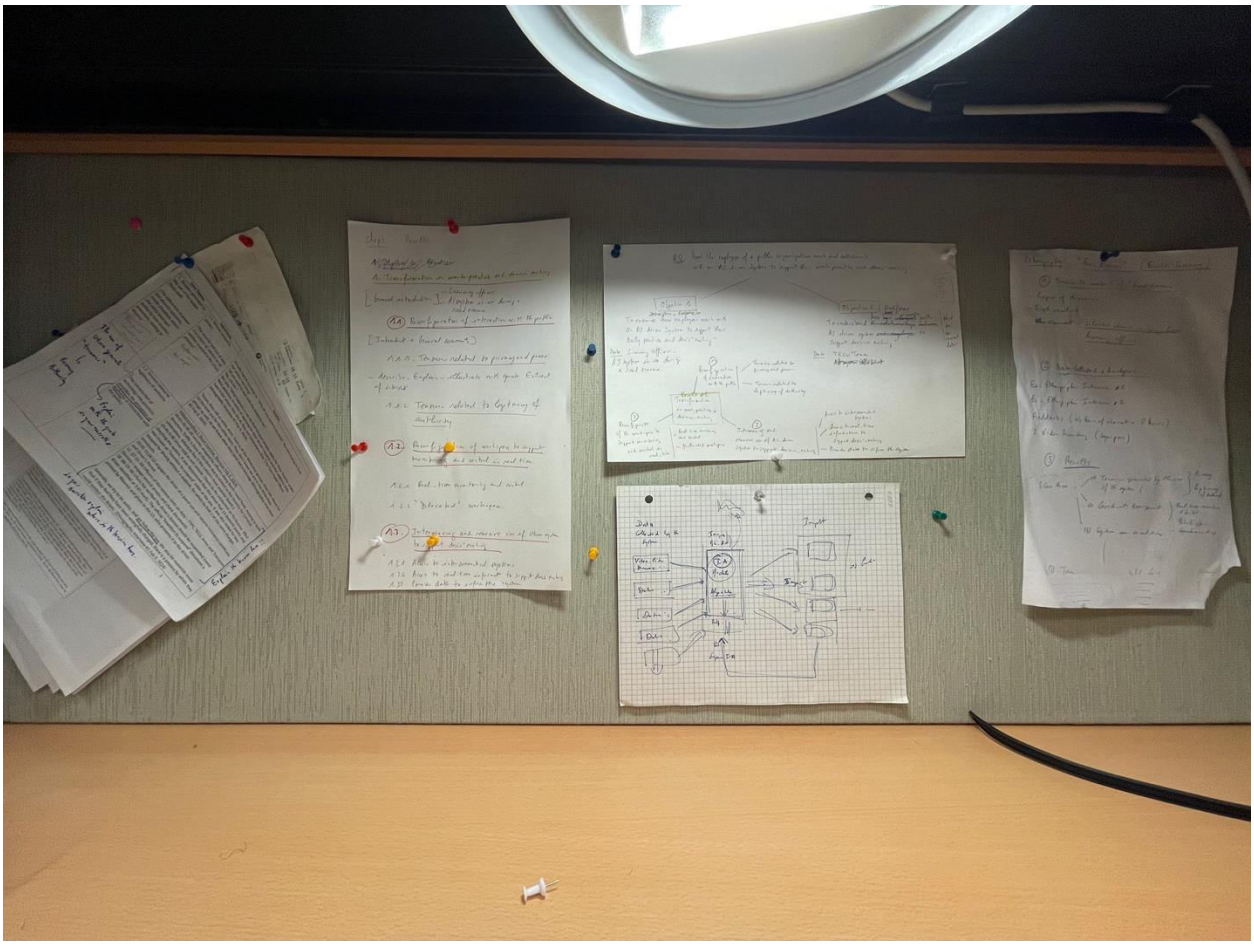


Figure 8. *The Researcher's Desk: An Ode to Iterative Refinement*

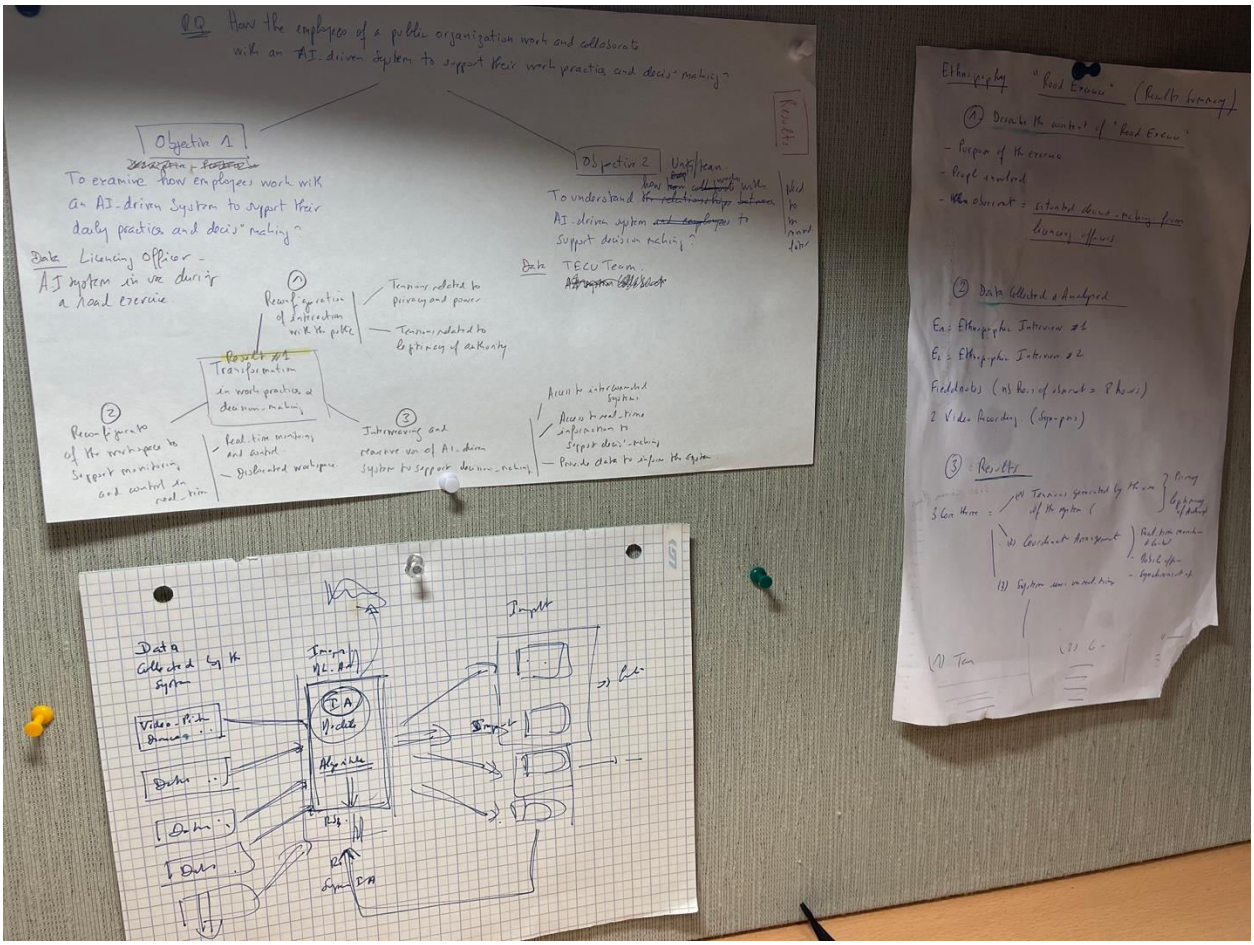


Figure 9. *This Picture Reflects the Initial Approach to Coding Where the Themes and Concepts Were Initially Identified and Being Refined*

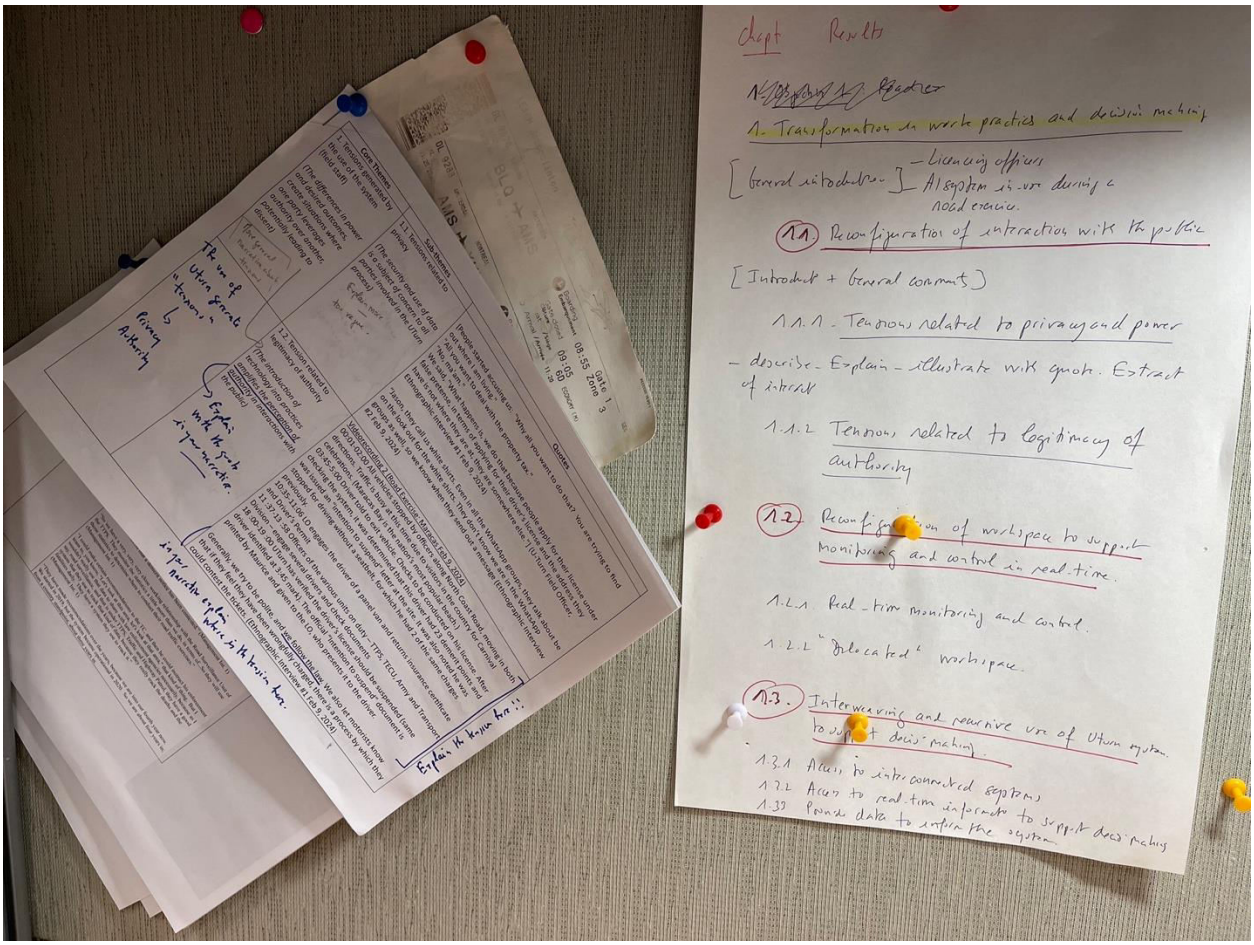


Figure 10. *Memo and Notes on Coding Sheets Reflect the Questions Raised About Applicability and Consistency of Codes*

4.6.2 Theme Development and Verification

Following the coding procedure, the next stage involved developing coherent themes that captured patterned meanings across the dataset and addressed the overarching research objectives. Braun & Clarke (2019) describe this phase as moving from codes, which are descriptive labels of data segments, to themes, which are broader interpretive constructs that tell a story about the data in relation to the research questions.

The process began by reviewing all coded data extracts to identify underlying patterns, relationships, and tensions within and across participant accounts. Each potential theme was assessed based on its: (i) prevalence (how often it appeared across participants or contexts), (ii)

richness (depth and complexity of meaning), and (iii) relevance to the research objectives and theoretical framework.

This involved clustering related codes under candidate themes and writing detailed analytic memos that explored what each theme captured and what it revealed about practices of AI supported decision-making and organizational work. Themes were then refined through an iterative process to ensure they were: (i) internally coherent (data within each theme fit together meaningfully), (ii) distinct from one another (each theme captured a unique aspect of the data), and (iii) grounded in the data.

During this stage, some themes were collapsed into broader categories if they overlapped significantly, while others were split into sub-themes to reflect nuanced variations in the data. The themes were aligned to the research questions, for example RQ 1 focused on senior managers interaction with the UTurn and their concerns around implementation and use. The themes for this research question therefore took into consideration the social factors that affected the implementation of the UTurn, ergo one of the main themes in this section was “Combating corruption and enhancing transparency”. The same formula was used for the other RQs, therefore the major theme “UTurn use framed by the law” was significant in RQ2 because those users (TECU) were guided legally and operationally by the law in their daily routines, TECU also formed most of the data used to answer RQ2.

One of RQ3’s major themes was “Reconfiguration of interaction with the public” because the RQ looked at the members of the organization that interacted directly with the public and as such their use of the UTurn was framed differently. The themes therefore were tailored to ensure that the core group being studied was represented well in the study while still maintaining adherence to the research question.

Rather than relying on qualitative analysis software, the coding and theme development process was carried out manually, involving systematic review of printed and digital transcripts. Importantly, coding decisions and emerging thematic structures were regularly reviewed and refined in consultation with my supervisor. These collaborative discussions served as critical verification steps, enhancing the credibility and trustworthiness of the analysis by challenging assumptions, clarifying interpretations, and ensuring consistency and alignment with the theoretical framework and research questions. Draft thematic maps and supporting data extracts were shared and discussed in supervisory meetings to:

1. Confirm interpretive validity, ensuring that theme names and definitions accurately represented the underlying data.
2. Interrogate assumptions and biases, refining themes to avoid overgeneralization or under-representation of minority perspectives.
3. Ensure theoretical alignment, particularly that themes illuminated aspects of sociomateriality, practice-based studies, and organizational communication relevant to AI integration.

The finalized themes were clearly defined, named, and supported with representative data extracts, analytic interpretation, and connections to the research questions. Each theme was then situated within the broader narrative of the findings to ensure a cohesive and persuasive account that addressed the research objectives (see Table 9 for examples).

Table 9. *Examples of Code Development*

Raw Extract	Initial Code	Revised Code	Theoretical Guidance
"So, I do the audit, access to the VMS system, which I do, and then we tap into it and when we check we realize, you know, right vehicle, wrong color; or right number plate, wrong type of vehicle."	System as instruction	Access to real-time information to support decision-making	Sociomateriality
"Staff routinely consult each other for decisions generated by the system."	Data-guided enforcement	Data-driven decision-making	Practice-based
"All the information needed for the decision is system generated and accessible by staff with the necessary permissions"	System decides	Enhanced data access and analysis	Ventriloquism

4.7 Methodological Limitations and Mitigation

While the methodological design of this study was intentionally robust, providing a rich ethnographic lens on AI-supported decision-making practices in a public sector context, certain limitations inherent to ethnographic and constructionist research must be acknowledged. As Hammersley & Atkinson (2019) and O'reilly (2012) note, limitations in fieldwork are not solely practical obstacles but are epistemologically embedded in the nature of ethnographic inquiry. These include challenges related to partial access, power dynamics, and the constructed nature of observation and interpretation. Rather than seeking to eliminate such constraints, this study embraces a reflexive stance that views them as integral to the knowledge production process (Finlay, 2002; Richardson et al., 2005). Following Lincoln and Guba (1985) concept of transferability, the aim is not to produce universally generalizable findings, but to offer thick, contextualized insights that may resonate with or inform similar settings.

Additionally, as Ybema et al. (2009) argue, the ethnographic account is always a situated narrative, shaped by the researcher's theoretical commitments, field presence, and interpretive frames. Considering this, the following sections outline key limitations associated with

participant access, researcher positionality, contextual transferability, and methodological constraints, while also highlighting the strategies employed to mitigate their impact and enhance the transparency and trustworthiness of the study. The methodological design of this study was robust, providing a detailed ethnographic lens on AI decision-making practices, certain limitations inherent in the research approach and context must be acknowledged. Reflexivity in qualitative research requires that the researcher critically assess potential limitations to ensure transparency and to enable readers to interpret findings within the appropriate scope (Finlay, 2002) . These limitations can arise from several factors including participant-related constraints, researcher positionality, transferability (Lincoln & Guba, 1985), and methodological design, each of which potentially impacts the richness and broader contextual applicability of the findings.

4.7.1 Participant-Related Constraints

The major limitations of this study were related to participant access and selection, which was influenced by practical and organizational constraints. Getting access to the senior management proved to be initially very difficult and was subsequently facilitated through a gatekeeper. Understandably, the Transport Commissioner is in significant demand and meeting times were initially scarce. However, once there was discussion about the nature of the study, the departments of the Transport Division were made available for study in a comprehensive manner. The subsequent participant sample for this study, though purposefully selected, reflected a snapshot of individuals working within the Trinidad and Tobago Transport Division and their interactions with the UTurn system. Thoroughly interrogating all the key contributors to the study required multiple trips to Trinidad.

While the study aimed to capture a diverse range of experiences from senior management, officers, and administrative staff, the recruitment process was limited by availability and willingness to participate. The TECU, as an example, is a highly sensitive unit that deals with confidential data, ergo, while the department had over 20 members, interaction was limited to one representative for each core job function. Furthermore, interviews with specific groups, such as field officers and TECU staff working directly with the UTurn system, were constrained due to the scheduling commitments and availability of frontline staff, bearing in mind all these research activities took place during an active workday. Consequently, their voices may not have been as fully represented in the analysis.

Additionally, power dynamics between the researcher and participants could also be seen as a limitation. Staff at different organizational levels, particularly those in senior positions, may have been more likely to provide socially desirable responses, particularly regarding the success and integration of the UTurn system. This issue is particularly notable in hierarchical settings where employees may feel obliged to present positive portrayals of their organizational practices to avoid repercussions. Although efforts were made to build rapport and trust through multiple visits and informal conversations, the asymmetry in power between the researcher and the participants, especially from the managerial levels, may have impacted the candidness of responses.

A further limitation arose from the access to sensitive data, while the study aimed to observe AI-supported decision-making practices, not all employees were authorized to discuss or access data related to the UTurn or its use. In certain instances, this lack of full access constrained the depth of inquiry into specific aspects of the system's operation in supporting decisions made.

Some of the issues were mitigated through direct interventions of senior management who authorized additional access with the understanding that personal information would be obscured. In the case of the Licensing Officers on the road exercises, observation was limited because of safety and privacy considerations, this was mitigated through videotaping from a distance and ethnographic interviews. As Finlay (2002) posited, "recognizing research as a co-constituted account, adherents of participative research argue that as research participants also have the capacity to be reflexive beings, they can be co-opted into the research as co-researchers. At the very least this involves participants in a reflexive dialogue during data analysis or evaluation."

Data triangulation through multiple sources (interviews, observations, and documents) was employed to validate findings. In future studies, engaging a wider range of stakeholder groups, may improve representativeness and the inclusivity of participant perspectives.

4.7.2 Researcher Reflexivity

Researcher reflexivity in qualitative studies plays an essential role in minimizing bias and enhancing transparency, especially in ethnographic studies where the researcher is deeply involved in the data collection process. As the researcher, I acknowledged the influence of my own background, including my academic training in organizational communication as well as my positionality as an outsider to the government agency being studied. I also acknowledged that even though I am Trinidadian, my academic training has been primarily in North America, which can contribute to bias.

A notable aspect of my positionality was my awareness of the insider-outsider dynamics, particularly as I navigated relationships with the Transport Division's staff, a group with its own ingrained practices, norms, and power relations. While my academic training equipped me with

the tools to interpret data, my background in organizational communication, may have shaped my approach to data collection and analysis. For example, I may have been inclined to highlight organizational communication aspects more strongly than other potentially equally important facets, such as the technical AI aspects of decision-making.

I took multiple steps to manage this reflexivity throughout the study; the first step involved engaging in the process of identifying and setting aside preconceived notions and biases through journal writing and regular discussions with my supervisor. Second, I ensured a thorough and rigorous member-checking process, allowing participants to review interview transcriptions, reflect on their answers and confirm the accuracy of their statements. This ensured that the interpretations presented were grounded in participants' actual perspectives, rather than an over-interpretation from the researcher's standpoint.

4.7.3 Transferability

A common limitation associated with qualitative research, particularly single-case ethnographic studies, is the question of transferability, that is, the extent to which findings may be meaningfully applied to other settings. This study centers on a specific organizational context: the Transport Division of Trinidad and Tobago and its integration of the UTurn system. As such, the findings are not intended to be universally applicable across all organizations, particularly those outside the public sector or with significantly different technological infrastructures.

However, consistent with Lincoln & Guba (1985) conceptualization of transferability, the value of this research lies in its provision of thick description, a richly detailed account of the organizational setting, decision-making practices, socio-technical interactions, and actor perspectives. This depth enables readers to make informed judgments about the relevance and applicability of the findings within their own contexts. By tracing how AI systems are enacted

through practice, policy, and discourse in a Caribbean public organization, the study offers transferable insights for scholars and practitioners grappling with similar challenges in public sector digital transformation, particularly where issues of automation, discretion, and legitimacy are salient.

The study's layered documentation of context, including the legislative environment, inter-agency coordination, cultural norms, and on-the-ground interactions with technology, provides a robust foundation for analytic resonance across comparable cases. While direct replication may be limited, readers in other jurisdictions or sectors can discern points of similarity, contrast, or conceptual relevance. Future research may build on this work by conducting comparative ethnographies in diverse public institutions to further explore the situated dynamics of AI integration and organizational change.

4.8 Chapter Summary

This chapter outlined the methodological choices and processes underpinning this study, anchored within a social constructionist epistemological paradigm. It sought to justify the selection of organizational ethnography as the primary methodological approach, providing a detailed account of field access, ethical considerations, and the phased design of data collection. It elaborated on the sampling strategy, participant profiles, and the rationale for engaging diverse actor groups to gain a multidimensional understanding of practices and decision-making. Further, it outlined the data collection instruments employed, including interviews, direct observations, shadowing, and document analysis, and explained the systematic approach to data analysis using reflective thematic analysis in collaboration with my supervisor.

Importantly, the chapter addressed reflexivity, recognizing the researcher’s positionality, intersubjectivity, and the power dynamics inherent in ethnographic work. Methodological

limitations were discussed, acknowledging constraints such as organizational gatekeeping, and potential biases arising from the researcher's embeddedness within the field.

Overall, this chapter aimed to demonstrate adherence to methodological tenets and alignment with the study's objectives to examine, amongst other things, AI-user collaboration, organizational change due to AI integration, and decision-making. It provided a transparent and rigorous foundation upon which the subsequent findings and discussion chapters build, ensuring that the interpretations presented are grounded in systematic data collection and analysis.

5 Results

Reconfiguring Public Sector Practices through AI: The Case of the UTurn System

This chapter presents the key findings of the study and demonstrates how the introduction of the UTurn system has reshaped decision-making, organizational practices, and public-sector service delivery in Trinidad and Tobago. The results are organized around three interrelated analytical themes that directly address the research question:

1. From Corruption to Transparency: How the UTurn system, combined with legislative reform and organizational restructuring, disrupts historical patterns of corruption and introduces new accountability mechanisms.
2. Reconfiguring Decision-Making: How decision-making is redistributed across human and non-human actors through automation, interconnectivity, and legal constraints, reshaping power relations between agencies.
3. AI in Practice: Everyday Use, Tension, and Organizational Learning: How employees and stakeholders engage with the UTurn system in daily practice, including tensions, generational differences, and the development of new work routines.

These themes go beyond simply describing the system's operation, they exemplify how technology becomes entangled with legislation, organizational culture, and human agency, producing new ways of governing and managing public interaction. Each section highlights not just what has changed, but why these changes matter for understanding the transformation of authority, accountability, and legitimacy in public-sector decision-making.

These findings will show that the UTurn system is far more than a technical intervention; it is a sociomaterial assemblage that transforms organizational culture, redistributes decision-making authority, and embeds legal compliance into everyday practice. In doing so, it reconfigures the relationship between citizens and the state, strengthens transparency and accountability, and enables more efficient and legitimate forms of public-sector decision-making. These results highlight not only what has changed but why these changes matter, offering critical insight into the evolving nature of governance in a digitally mediated public service environment. Appendix A shows a map of the results, guided by the research questions and the reflexive thematic analysis conducted on that data gathered, that constitute the requisite themes that align with the RQs.

5.1 From Corruption to Transparency: New Organizational Practices (RQ 1)

The first theme illustrates how the UTurn system has become a central mechanism for transforming the Licensing Authority's reputation and operations from a historically corruption-prone agency to one oriented around transparency and accountability. This transformation is not simply technical; it is sociomaterial, involving the simultaneous reconfiguration of work practices, oversight mechanisms, and the relationship between state and citizen. Appendix B contains the data used to help address the concepts identified in this section. It is the thematic data analysis of interviews held with the senior management.

5.1.1 Combating Corruption and Enhancing Transparency

Corruption within the Licensing Authority was long recognized as a systemic challenge, undermining efficiency, public trust, and organizational legitimacy. Participants and national media repeatedly described a culture in which discretionary decision-making and manual systems enabled fraud, bribery, and the illicit "supplementing of income." As one manager

explained, “UTurn now has cut out that supplemental income that a lot of these persons would have been benefiting from… because when you have manual systems, it is easy to doctor documents” (Management Interview #4).

The UTurn system disrupted this pattern by embedding digital checks and balances into every transaction. Each action leaves an auditable trail, complete with time and user stamps, making fraudulent activities traceable and prosecutable. This is not merely a shift in process but a reconfiguration of organizational norms, it signals to employees that corruption is no longer invisible and to the public that the institution is reclaiming its integrity.

Media coverage during the study period confirmed this tension, reporting both arrests of staff members and ongoing challenges in eradicating corruption (Licensing Dept Clerk Charged with Vehicle Transfer Fraud, 2024 ; Three Held in Joint TTPS-Licensing Probe for Fraud, Corruption, 2023). These events reveal that while corruption has not been entirely eliminated, the system now facilitates detection and accountability, reducing opportunities for indiscretion and reinforcing formalized, traceable oversight.

5.1.1.1 Addressing historical corruption in licensing processes

The UTurn system was implemented as a direct response to decades of corruption in the Licensing Division. Drawing on interview data, field observations, and media reports, this section speaks to how digitalization, policy reform, and enforcement mechanisms have disrupted illicit practices and reshaped the accountability environment.

Corruption at the Licensing Division was described by participants as systemic, generational, and deeply embedded in organizational culture. Over the last fifteen years, multiple high-profile cases of fraud and arrests have been reported in national media, reinforcing public perceptions that the institution was compromised. A senior manager reflected on this

environment, “Where we found problems… persons began showing serious fear for change based on the fact of what we may have found through the digitization process within the environment. And therefore, in doing so, we discovered a number of things, sadly, that staff would have found themselves in the hands of the Police through the digitization process” (Management Interview #1).

This admission captures both the depth of the problem and the disruptive nature of introducing a technology designed to surface irregularities. These incidents underscore that while corruption persists, detection and enforcement are now materially supported by the system.

This shift was not only technical but cultural, it signaled that discretion would be replaced by rule-based, trackable procedures. Another manager acknowledged that this change generated pushback among some employees, “We were able to discover vehicles that were transferred fraudulently… staff resisted not wanting to support the change in the system, because of fear of probably not being able to participate in things that they may have benefited from.” (Management Interview #1).

These findings suggest that the UTurn functions as both a monitoring mechanism and a behavioral intervention, curbing opportunities for corruption and altering employee incentives. The data further revealed that the UTurn’s introduction was accompanied by new organizational policies and disciplinary procedures. Desk manuals, standardized workflows, and site-wide guidelines were implemented to ensure uniformity across nine service locations, “We were able to treat with it, one, by basically setting standards and policies in terms of what is required in a number of our services… ensuring there is synergy across the different nine sites” (Management Interview #1).

Managers emphasized that these changes were supported by clearer disciplinary measures, ensuring that employees understood the consequences of misconduct, “We also had to put things in place in relation to procedures for disciplinary measures, letting the staff know what the outcome could be if they find themselves in doing the wrong things” (Management Interview #1).

Analysis of interview data suggests that management addressed the corruption challenge through a three-pronged approach: acknowledgment of the problem, direct enforcement actions, and structural reform: acknowledgement of the problem; enforcement actions, reform and standardization.

By acknowledging the issue, leaders openly recognized the existence of corruption, signaling an organizational break from tacit tolerance of the past. As one manager explained, “UTurn now has cut out that supplemental income that a lot of these persons would have been benefiting from in the systems that have gone before, because when you have manual systems, it is easy to doctor documents.” (Management Interview #4). This acknowledgment helped prepare employees for stricter oversight and positioned reform as a necessary organizational priority.

The introduction of audit trails and data-driven monitoring empowered the organization to detect and act upon fraudulent behavior. Several arrests occurred during the study period, and managers confirmed that the UTurn served as a powerful investigative tool. Corruption was not only discouraged but actively rooted out using digital evidence. To ensure long-term integrity, the organization implemented standardized workflows, desk manuals, and new disciplinary protocols. This created greater consistency across nine service sites and gave staff clear expectations for conduct, “We were able to treat with it, one, by basically setting standards and policies in terms of what is required… ensuring there is synergy across the different nine sites”

(Management Interview #1). These measures represented a shift from ad hoc responses to an institutionalized standardized organizational infrastructure that embeds prevention and accountability into routine operations.

The combined approaches embedded prevention, detection, and enforcement into everyday operations. While the UTurn system has measurably reduced opportunities for fraud, participants acknowledged that corruption has not been entirely eradicated. Employees interviewed by the media noted that corruption "remains part of the organization's culture," even as its prevalence has declined. As one employee told the Sunday Guardian, "You could be the righteous one, but you will likely end up suffering… if you do the right thing, you suffer. So, it is very difficult to walk that path" (*Bribes Still Passing at Licensing*, n.d.).

This underscores that technological intervention must be accompanied by cultural change efforts. By fragmenting processes across multiple users, introducing checks and balances, and digitizing transactions, UTurn has made collusion more difficult, but not impossible. The findings therefore suggest a dual reality: corruption is harder to conceal, and a strong aversion to reform persists, making cultural adaptation an ongoing challenge.

5.1.1.2 Building Public Trust and Encouraging Accountability

A critical finding of this study is that the UTurn system was not only designed to combat corruption internally but also to rebuild the legitimacy of the Licensing Authority in the eyes of the public. For decades, the Transport Division was associated with inefficiency, opacity, and misconduct; overcoming this legacy required more than technical reform. It required a deliberate communication strategy that reframed enforcement as transparent, rule-based, and ultimately accountable to citizens. In 2008, the Trinidad & Tobago government partnered with the Canadian province of Nova Scotia to help with the modernization of the organization (Newsday, 2008).

The desire for a more transparent organization has been touted for at least 40 years, with incremental changes that have not put the public at ease.

This section argues that communication practices surrounding the UTurn should be understood as an exercise in legitimation. Public awareness campaigns, system-generated notices, and user-facing portals do not merely inform motorists, they demonstrate the state's ability to act predictably and fairly. By embedding legal requirements into every notice, offering citizens direct access to their own driving records, and enabling clear avenues for appeal, the system performs transparency and, in turn, fosters trust.

The Ministry of Works & Transport (MOWT) played a central role in shaping this strategy. While the Transport Division implemented new procedures, MOWT coordinated the broader narrative: positioning the UTurn as a modernization initiative that enhanced road safety, reduced corruption, and gave citizens greater agency. This division of roles reflects how legitimacy is co-constructed across institutions, with one body establishing the message and another enacting it in everyday practice.

The Ministry of Works & Transport coordinated a comprehensive outreach campaign to reposition the Transport Division as a modernized, citizen-focused service. Senior officials stressed that the objective was not punitive but corrective, reducing road accidents and changing driving behavior. As one manager noted, "When we started promoting the project… we started talking about basically the benefits of implementing a new demerit point system and traffic management system to create safer roads in Trinidad and Tobago" (Management Interview #2).

This narrative was reinforced through YouTube explainer videos, press releases, and stakeholder meetings with groups such as taxi drivers and transport associations. By directly

addressing citizens in accessible language and formats, these initiatives worked to align the system's enforcement goals with broader social values like road safety and fairness.

Communication was also embedded into the technical design of the UTurn, every ticket, demerit point notice, and rehabilitation letter carried not only a legal mandate but also a message that reinforced transparency. Motorists could view their accumulated points (through the User Portal), the reason for penalties, and their options for contestation or appeal. The standardization of these notices reduced the instances of arbitrary interpretation and underscored that all drivers were subject to the same rules. These notices thus served a dual purpose; they enforced compliance while simultaneously demonstrating accountability. By ensuring that citizens could trace the reasons for penalties and had access to formal avenues of redress, the system enacted fairness as visible.

The distinction between institutional roles further reinforced legitimacy, while MOWT framed the reform as part of national modernization, the Licensing Authority operationalized these commitments in daily interactions with citizens. Staff were trained to explain notices, direct motorists to online portals, and process appeals in accordance with standardized guidelines, these practices demonstrated that accountability was not just rhetorical but organizationally embedded.

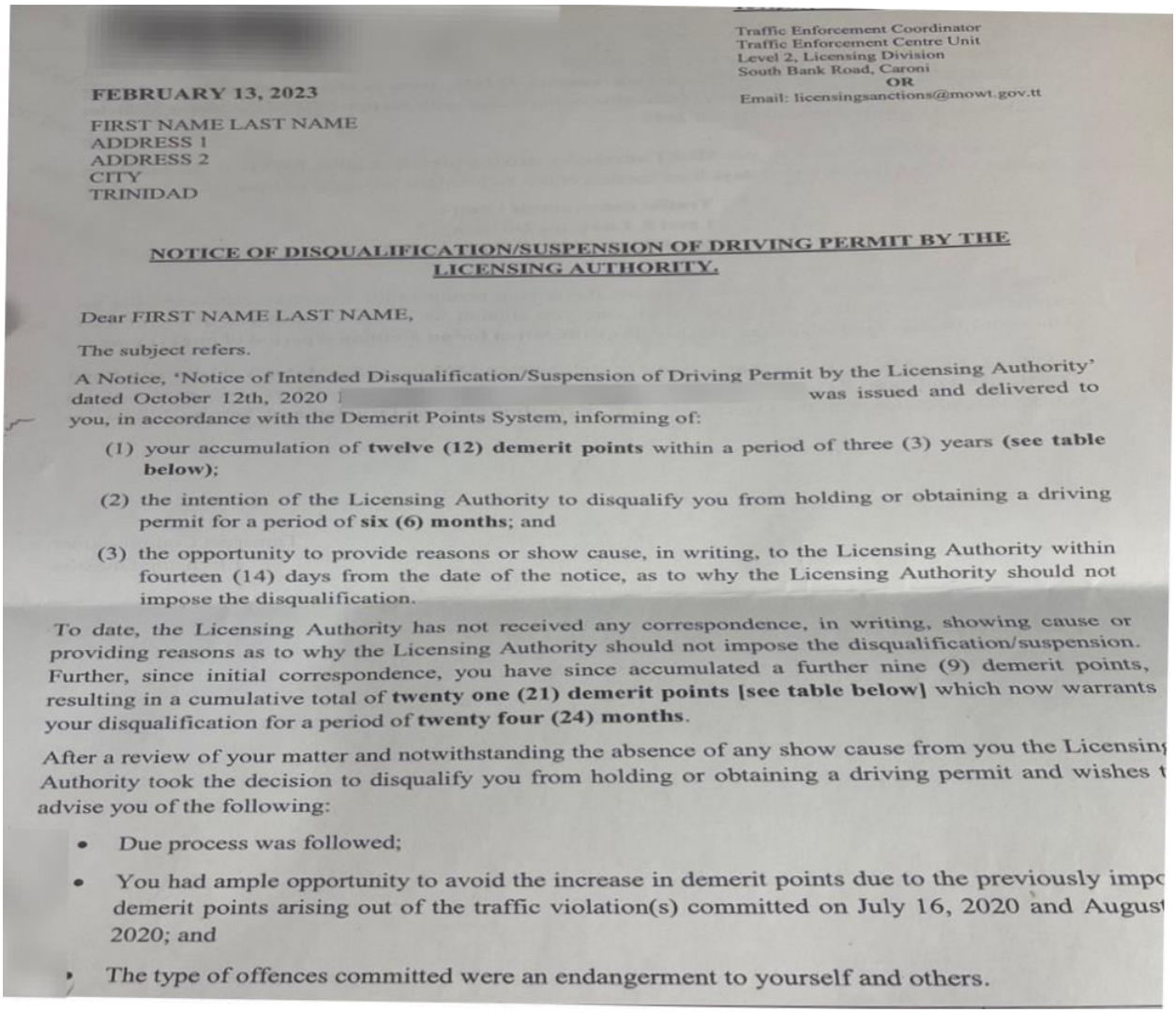
This integration of communication, technical transparency, and institutional alignment strengthened citizen perceptions of fairness. Instead of experiencing traffic enforcement as an opaque, punitive process, motorists were increasingly able to see it as predictable, lawful, and contestable. This shift was central to rebuilding trust in the Licensing Authority and reframing it as an institution of public accountability rather than corruption.

Equally significant was how technology itself became part of the legitimacy narrative. Officials emphasized that Artificial Intelligence was central to ensuring the system's credibility:

> "What we used artificial intelligence for was to streamline the operations of the system. So, our communication wasn't based on the computerized system...When we started promoting the project, it was not promoted from a technology-based implementation strategy per se. We started talking about basically the benefits of implementing a new demerit point system and traffic management system to create safer roads in Trinidad and Tobago. When we had to explain how the system is going to operate, that is where the whole issue of artificial intelligence came in, and what we sought to highlight were the benefits of the use of technology, in terms of reducing incidences of corruption" (Management Interview # 2).

This framing positioned AI not just as a technical innovation but as a safeguard of integrity. By highlighting that the system automatically tracked every decision and generated auditable records, the Licensing Authority and MOWT conveyed that enforcement was insulated from human interference. In public discourse, AI thus functioned as a symbolic and material guarantee of transparency, strengthening citizen confidence that traffic enforcement would be applied consistently and fairly.

The document below (Figure 11), shows how sanctions are communicated through a sequence of traceable information, including reference numbers, point accumulation history, procedural records, reinforcing the Transport Division's claim that "due process was followed." The UTurn system produces standardized notices that demonstrate how enforcement actions are documented and communicated, each notice provides a sequence of information that is inherently traceable:



Traffic Enforcement Coordinator
Traffic Enforcement Centre Unit
Level 2, Licensing Division
South Bank Road, Caroni
OR
Email: licensingsanctions@mowt.gov.tt

FEBRUARY 13, 2023

FIRST NAME LAST NAME
ADDRESS 1
ADDRESS 2
CITY
TRINIDAD

NOTICE OF DISQUALIFICATION/SUSPENSION OF DRIVING PERMIT BY THE LICENSING AUTHORITY.

Dear FIRST NAME LAST NAME,

The subject refers.

A Notice, 'Notice of Intended Disqualification/Suspension of Driving Permit by the Licensing Authority' dated October 12th, 2020 was issued and delivered to you, in accordance with the Demerit Points System, informing of:

(1) your accumulation of **twelve (12) demerit points** within a period of three (3) years **(see table below)**;

(2) the intention of the Licensing Authority to disqualify you from holding or obtaining a driving permit for a period of **six (6) months**; and

(3) the opportunity to provide reasons or show cause, in writing, to the Licensing Authority within fourteen (14) days from the date of the notice, as to why the Licensing Authority should not impose the disqualification.

To date, the Licensing Authority has not received any correspondence, in writing, showing cause or providing reasons as to why the Licensing Authority should not impose the disqualification/suspension. Further, since initial correspondence, you have since accumulated a further nine (9) demerit points, resulting in a cumulative total of **twenty one (21) demerit points [see table below]** which now warrants your disqualification for a period of **twenty four (24) months**.

After a review of your matter and notwithstanding the absence of any show cause from you the Licensing Authority took the decision to disqualify you from holding or obtaining a driving permit and wishes t advise you of the following:

- Due process was followed;
- You had ample opportunity to avoid the increase in demerit points due to the previously impo demerit points arising out of the traffic violation(s) committed on July 16, 2020 and August 2020; and
- The type of offences committed were an endangerment to yourself and others.

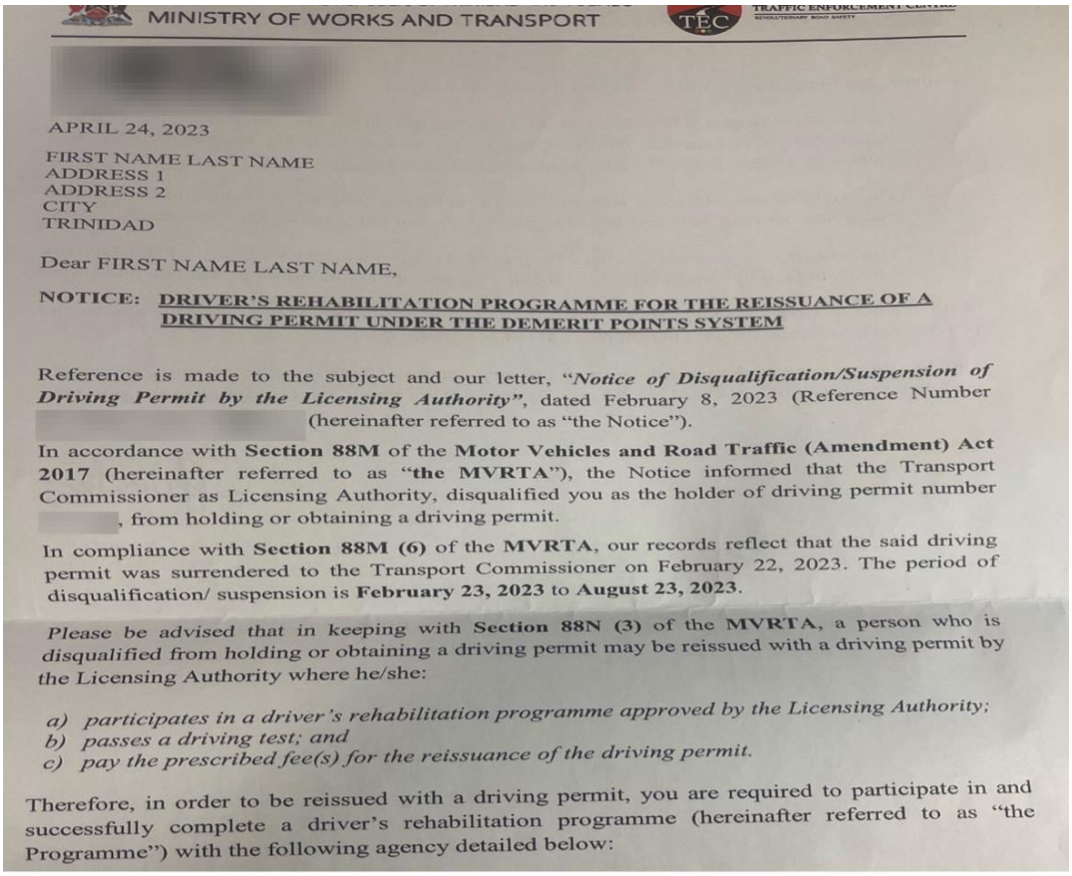
Figure 11. *Anonymized Disqualification Notice Generated by the UTurn System.*

1. Reference number: every letter carries a unique identifier which links the notice to a specific case in the system.
2. Point accumulation history: the document specifies the number of demerit points accumulated (*twelve points in three years*), additional infractions (*nine points*), and the cumulative total (*twenty-one points*).
3. Procedural record: it explicitly notes that an earlier notice was issued (October 12, 2020) and that the motorist failed to respond within the required fourteen-day period.

4. Outcome: the disqualification decision is clearly stated (*twenty-four months suspension*).

In addition to recording this sequence, the notice explicitly asserts that "due process was followed" and that the motorist was given "ample opportunity" to respond. These statements are not neutral; they reflect the language through which the Licensing Authority legitimizes its actions and demonstrates compliance with legal and procedural norms.

Figure 12 (Rehabilitation Notice) shows the corresponding rehabilitation notice. This letter provides the procedural conditions for reinstating a permit, referencing specific sections of the *Motor Vehicles and Road Traffic (Amendment) Act*, it details the suspension period and outlines requirements such as completing a rehabilitation programme, passing a test, and paying the prescribed fee. By narrating the pathway back to compliance, the state positions itself not only as an enforcer but also as corrective and rehabilitative. It demonstrates how accountability is performed not only through sanction but also through a structured pathway to remediation.



MINISTRY OF WORKS AND TRANSPORT

TEC

TRAFFIC ENFORCEMENT CENTRE

[redacted]

APRIL 24, 2023

FIRST NAME LAST NAME
ADDRESS 1
ADDRESS 2
CITY
TRINIDAD

Dear FIRST NAME LAST NAME,

NOTICE: DRIVER'S REHABILITATION PROGRAMME FOR THE REISSUANCE OF A DRIVING PERMIT UNDER THE DEMERIT POINTS SYSTEM

Reference is made to the subject and our letter, "***Notice of Disqualification/Suspension of Driving Permit by the Licensing Authority***", dated February 8, 2023 (Reference Number [redacted] (hereinafter referred to as "the Notice").

In accordance with **Section 88M** of the **Motor Vehicles and Road Traffic (Amendment) Act 2017** (hereinafter referred to as "**the MVRTA**"), the Notice informed that the Transport Commissioner as Licensing Authority, disqualified you as the holder of driving permit number [redacted], from holding or obtaining a driving permit.

In compliance with **Section 88M (6)** of the **MVRTA**, our records reflect that the said driving permit was surrendered to the Transport Commissioner on February 22, 2023. The period of disqualification/ suspension is **February 23, 2023** to **August 23, 2023**.

Please be advised that in keeping with **Section 88N (3)** of the **MVRTA**, a person who is *disqualified from holding or obtaining a driving permit may be reissued with a driving permit by the Licensing Authority where he/she:*

a) participates in a driver's rehabilitation programme approved by the Licensing Authority;
b) passes a driving test; and
c) pay the prescribed fee(s) for the reissuance of the driving permit.

Therefore, in order to be reissued with a driving permit, you are required to participate in and successfully complete a driver's rehabilitation programme (hereinafter referred to as "the Programme") with the following agency detailed below:

Figure 12. *Anonymized Rehabilitation Notice Generated by the UTurn System.*

These documents, together with management's reflections, show how the UTurn operationalizes both sanction and remediation through standardized communication. They also show how the state performs accountability: disqualification is tied to traceable infractions, and reinstatement is tied to legislatively mandated corrective steps. At the same time, it is important to acknowledge that the presence of traceable documentation and references to "due process" does not guarantee that citizens perceive the process as transparent or fair. These correspondences to the public should therefore be read as part of the state's strategy to demonstrate legitimacy through documentary practices, rather than as conclusive evidence that legitimacy has been achieved.

5.1.2 Legislation as the Driver for Change

The implementation of the UTurn system was not simply a managerial or technological innovation; it was fundamentally enabled and structured by law. The *Motor Vehicles and Road Traffic (Amendment) Act No. 9 of 2017* (MVRT Act) was the legislative foundation that gave the UTurn both its authority and its boundaries. Rather than serving as background context, legislation actively drove the reform by codifying infractions, penalties, and procedures for appeal, thereby transforming how accountability could be operationalized in practice.

This section argues that legislation should be understood as legitimation. By embedding traffic enforcement in statutory language, the state sought to narrow discretion, standardize outcomes, and demonstrate that sanctions were not arbitrary but legally mandated. At the same time, UTurn translated these legislative requirements into automated processes: disqualification letters reference specific sections of the MVRT Act, timelines for appeal are system-generated, and rehabilitation pathways are anchored in legislative provisions. Law and technology therefore function together as co-constitutive elements: the law legitimizes the system, and the system enacts the law.

However, while legislation provides the symbolic and procedural foundation for legitimacy, its existence does not guarantee that citizens will perceive enforcement as fair. Instead, the codification of rules and their translation into automated procedures should be seen as part of the state's performance of accountability, a performance that may still be contested in practice.

5.1.2.1 Aligning Organizational Processes to Legislative Reforms

The reforms introduced under the MVRT Act did not automatically translate into organizational practice, they required deliberate work within the Transport Division to ensure that statutory obligations were embedded into daily processes. Managers described this as a

period of significant restructuring in which workflows, staff responsibilities, and organizational oversight were reoriented to meet legislative demands.

One senior manager explained that the strength of the UTurn derived directly from its legal foundation, which forced the organization to act quickly and decisively:

> "…once the system… and this is the strength I believe and I will say that really drives this UTurn system, it is because the core of the UTurn is the law. It is not arbitrary policy; it is the law. Therefore, because it is the law, management had to make quick decisions, even down to financing the programme, because it is law, to implement the law" (Management Interview #1).

This statement demonstrates that the reforms were not treated as optional initiatives but as binding requirements. The legislative authority of the Act compelled managers to secure resources, adjust operations, and implement changes that might otherwise have been contested or delayed.

Another recurring theme was the way legislation guided the design of standardized operating procedures, managers highlighted that statutory reforms were broken down into practical operating guidelines, codes of conduct, and manuals designed to ensure consistency across sites:

> "So, the Act, the *Motor Vehicles and Road Traffic Act 48:50, 9 of 2017, 15 of 2020*, those are our guiding documents… we had to break down the processes into standard operating procedures to allow for, 'This is how we do business here.' Some of the policies we had to put in place were in terms of what we call the code of conduct" (Management Interview #4).

Here, legislative reform was translated into organizational practice by formalizing how staff were expected to perform their roles. Standard operating procedures reduced the scope for discretion and emphasized uniformity across all nine Licensing sites. Managers also noted that technology was deliberately positioned as following legislative reform rather than driving it. As one participant explained, "…the technology did follow legislation. What I can't tell you at this point in time is the sequence in which the legislation would have changed. What I do know is that a couple years ago, the Ministry would have identified a suite of legislation" (Management Interview #2).

This reinforces the point that the law set the framework within which technology operated. The UTurn was not an innovation in search of justification; rather, it was an instrument designed to enforce, monitor, and communicate legislative requirements.

Finally, managers acknowledged that tension accompanied this alignment process, some staff were uneasy about the narrowing of their roles, the increased monitoring embedded in the system, and the loss of perceived autonomy that had afforded them greater discretion.

These interviews show that aligning organizational processes to legislative reforms was neither automatic nor smooth. It required deliberate managerial effort to translate laws into standardized procedures, restructure staff responsibilities, and adjust workflows. The reforms reshaped organizational culture by reducing discretion, enforcing uniformity, and embedding compliance within everyday practices. Legislative authority provided the justification, but it was organizational work that made alignment possible.

5.1.2.2 Reducing Administration and Operational Bottlenecks

The introduction of the MVRT amendments and the UTurn system was explicitly framed as a response to the persistent administrative and operational bottlenecks that had long

characterized the Licensing Authority and the wider traffic enforcement regime. Prior to reform, delays arose from handwritten tickets, duplicate records, and inconsistent enforcement, all of which clogged the Licensing Authority and, in turn, the Judiciary. UTurn was intended to replace these practices with automated processes that standardized enforcement, reduced delays, and ensured that penalties could be administered without overburdening the courts.

Senior managers stressed that one of the key drivers of reform was the need to prevent relatively minor traffic offences from escalating into broader problems within the justice system:

> "…we had to introduce a system in which we could, one, change behavior, and at the same time not create a situation where we could crowd our nation's prisons, and I need to say that with UTurn, because the traditional system was one where if you don't pay your fine for a ticket, a police officer could have come and arrested you and take you to prison and you would have found yourself being imprisoned with someone who might have committed heinous crimes for a simple traffic offence" (Management Interview #1).

This reflects how administrative reform was tied to a wider governance concern, keeping minor infractions out of the criminal justice system. By shifting enforcement to a digital platform, bottlenecks associated with arrests, detention, and court hearings for traffic violations were significantly reduced.

A second innovation was the system-driven sanctioning mechanism, rather than relying on the slow manual escalation of penalties, the UTurn integrated legislative thresholds into automated enforcement:

> "The new fixed penalty system brings with it more administrative and punitive measures into the picture, whereby if you don't pay your ticket, what is now administered upon you

> is either sanctions, where we freeze all your records with the Licensing Department and you cannot conduct any transactions with the Licensing Department, or you are disqualified if you reach to the point of several demerit points. So basically, it builds into a management system in a new way of applying punitive measures for ticketable offences" (Management Interview #1).

Efficiency was achieved not only by reducing delays but by replacing discretionary enforcement with immediate, system-driven penalties. This limited the need for court intervention and ensured that sanctions were consistent. The automation of the ticketing process itself also contributed to removing bottlenecks. As one manager explained, the time required to issue a ticket fell sharply:

> "When we go back to statistics, when we compare, a police officer or a Transport Officer may have taken close to about seven to eight minutes to issue a ticket, because of the old paper system. You have to write, you have to print carbon pages, etc. With the UTurn system, a fixed penalty ticket is issued in less than two minutes" (Management Interview #1).

This quantifiable reduction in administrative time exemplifies the practical impact of digitization: what was once cumbersome became routine, freeing officers for other duties. Further gains were made by moving payment processes away from the Judiciary and into TTPost offices, which streamlined the collection of fines:

> "…on the flip side, people saw efficiency in some areas, because things started to move faster. So, for example, if you got a ticket, you could go to TTPost and pay your ticket at whatever location that you want; they could pull up your records. You don't have to go

> and stand up in long lines. I think before you had to go to the courts to pay your ticket and that used to be a lengthy process. It removed that entire lengthy process, which also created a backlog for years, with people who don't want to pay their tickets" (Management Interview #1).

This reflects a redistribution of administrative functions: by moving payment to an agency already designed for revenue collection, bottlenecks in both the Licensing Authority and the Judiciary were relieved. The positive impact extended to the Judiciary, where digitization reduced the flood of traffic cases clogging the courts:

> "…if you talk to the TTPS and you talk to the Judiciary, they will also tell you about how the system was able to reduce a backlog. I can't speak to that. I can speak to the operation of the system and how it was quicker for people to get things done. Then, if you want to contest a traffic ticket, it was as easy as going on a website, contesting your traffic ticket, getting a date and then you go to court and you deal with it" (Management Interview #2).

The ability to contest tickets online streamlined interactions between motorists and the courts, reducing the strain on magistrates and clerks who previously managed these disputes through handwritten lists and lengthy hearings.

Finally, managers highlighted that the efficiency gains were recognized not only internally but also externally, as citizens reported improved experiences with the Licensing Authority:

> "…some of the key indicators to me, one, will be the overall efficiency, in terms of the operations of the Licensing Division, which have been documented internally and externally, and we could provide you with samples of persons writing into the Ministry

> congratulating the Ministry. There were a couple letters to the editor, I think, where people spoke highly about the improvements in operations and their experiences in the Licensing Division" (Management Interview #2).

Such feedback demonstrates that the reduction of administrative bottlenecks was visible to the public and contributed to restoring some degree of legitimacy to the Licensing Authority. These findings show that while the UTurn did not eliminate bottlenecks altogether, it significantly reduced many of the administrative delays and inefficiencies that had previously characterized traffic enforcement. By automating ticketing, reallocating payment responsibilities, and embedding statutory sanctions directly into the system, the reforms redistributed workload away from the Judiciary and frontline Licensing staff. In doing so, they not only streamlined processes but also redefined how minor offences were managed within the wider justice system.

5.1.2.3 Improve Road Safety and Traffic Management

The introduction of the UTurn and the demerit point system was framed as a public safety measure as much as an administrative reform. Managers repeatedly stressed that the system was designed to address persistently high rates of traffic accidents and fatalities, while also instilling behavioural change among motorists. One senior manager recalled the context of the system's launch:

> "…we also introduced a system against the backdrop of a very high road fatality rate…road fatality and road traffic accident rate. In fact, when we introduced the system in 2020, 2020 and 2021 saw the biggest reduction in road traffic accidents since 1956, and it was something that the Government was able to boast about from that perspective" (Management Interview #4).

This underscores that the UTurn was not only about digitization or efficiency but was explicitly tied to measurable reductions in road accidents and fatalities, which were historically stubborn policy challenges. In practice, the mechanism for improving safety lay in the integration of sanctions and deterrence into everyday enforcement. As one manager explained:

> "…it is also intended to deal with red light offences, as well as to put a management system to ensure that we change behaviour within the country as far as driving and carnage on the nation's roads… That, in a nutshell — changing behaviours of drivers — that is basically what the UTurn system seeks to achieve, and we hope by that we can bring a level of safety on the nation's roads and save lives" (Management Interview #1).

Road safety was linked directly to behaviour modification, drivers who accumulated points faced suspension or rehabilitation, creating incentives to comply with road rules. Another manager emphasized that the success of the system should be evaluated not in abstract terms, but by examining trends in specific offences:

> "…the objective of the demerit point system was to create safer roads, so, therefore, the success of this project will be really dependent on the figures for traffic accidents, the type of traffic accidents. It should be linked to a reduction in certain offences, for example, like wearing your seat belt, driving under the influence of alcohol. If I see changes in figures like that, then I could say it is successful" (Management Interview #2).

This shows how road safety improvements were monitored through a combination of accident statistics and changes in specific offence categories. In addition to deterrence, managers also described collaboration with law enforcement and data-driven monitoring as key to traffic

management. The TECU worked closely with the Road Surveillance Unit of the Trinidad and Tobago Police Service, which used UTurn statistics to guide enforcement operations, "…we have a very, very, very close working relationship with the Road Surveillance Unit of the TTPS. They monitor the statistics a little more than we do… they will use those statistics to determine where to conduct their road traffic exercises" (Management Interview #4). This highlights how road safety improvements extended beyond Licensing, feeding into policing strategies that targeted high-risk areas and behaviours.

Managers, however, also acknowledged limits to behaviour change, while most motorists adapted, a minority remained unwilling to embrace new norms, "There are still some… people who misuse the road habitually. And that culture change, as I say, it has to come in some instances through their pockets, in others by doing without their permits, or by going through the rehabilitative process. And then there are some who I think just have to learn it the hard way… just lose their life" (Management Interview #4).

This reflection suggests that while the UTurn introduced new incentives and sanctions, cultural change around road use remains uneven and, at times, there is marked defiance to administrative enforcement. These findings demonstrate that the UTurn contributed to improved road safety and traffic management by embedding deterrence through sanctions, generating actionable data for policing, and helping to reduce accident and fatality rates. At the same time, managers acknowledged the persistence of habitual offenders and the need for complementary strategies beyond automation.

5.1.3 Data-Driven and Transparent Decision-making

The reforms not only automated transactions but also redefined how decisions were made within the Transport Division. Managers emphasized that the UTurn allowed decision-making to

be anchored in data rather than anecdote, intuition, or personal discretion. This shift was framed as enhancing accountability and organizational credibility, particularly given the institution's past reputation for corruption and inefficiency. One manager described the importance of centralization:

> "…data is now centralized and is now easily accessible and retrievable, and that helps me significantly in terms of making decisions. One: reports, trends, as well as research and investigations, in that because the information is now there, it is easy for us to also foster better relationships with external stakeholders" (Management Interview #1).

This excerpt highlights that the system was not simply a record-keeping tool but a resource for organizational learning, external engagement, and strategic planning. On the enforcement side, managers noted that real-time access to Licensing databases enabled law enforcement to make faster and more informed decisions in the field:

> "The purpose of law enforcement agencies is that of the access to information for the issuance of tickets. So, they have real-time access to the Licensing database. Both the Driver's Permit database, as well as the vehicle database… If somebody presents a fraudulent DP to a law enforcement officer, they could find that immediately" (Management Interview #4).

Such access allowed officers to verify information on the spot, reducing reliance on judgment calls and limiting opportunities for fraudulent documents to circulate. The system also introduced audit trails, which managers described as a new form of oversight that made individual actions traceable:

> "The other thing we have built into the system is that of audit trails. So, everything that persons… every click they make on that system is recorded in an audit trail. Both the Transport Commissioner and I have access… so if any discrepancies take place, it is easily identifiable, because we know who did what" (Management Interview #4).

This functionality was often presented as the backbone of accountability, since officers and staff now acted with the awareness that their decisions were being logged and could be reviewed. However, managers also acknowledged that data standardization did not eliminate error or bias. As one explained:

> "…those are persons who put forward representations to us saying that they have never been issued tickets, but the system, the electronic system tells us that they got tickets. But we know that sometimes… it may have been a duplicated permit; an officer taking a 6 for a 9; an officer inputting the incorrect vehicle details, or various issues" (Management Interview #4).

These examples reveal that while the system produced the appearance of transparency and objectivity, data entry errors and human interpretation could still generate disputes, leaving space for contestation.

Overall, the UTurn's data-driven features were experienced as both enabling and constraining. On one hand, centralized databases, real-time access, and audit trails gave managers new tools to justify and defend their decisions, reinforcing the perception of transparency. On the other hand, the persistence of errors and the heavy reliance on data as the ultimate arbiter also raised questions about fairness and the burden placed on officials responsible for interpreting and acting on these records.

5.1.3.1 Support Decision-Making Through Real Time Data Access

Managers and frontline officers consistently described real-time access to Licensing databases as one of the most significant contributions of the UTurn system. Unlike the previous paper-based environment, decision-making could now occur on the spot, grounded in updated records rather than delayed reports or anecdotal accounts. One manager highlighted how centralization reshaped strategic decisions:

> "…data is now centralized and is now easily accessible and retrievable, and that helps me significantly in terms of making decisions. One: reports, trends, as well as research and investigations… because the information is now there, it is easy for us to also foster better relationships with external stakeholders" (Management Interview #1).

At the operational level, law enforcement officers underscored the value of immediate access to the Driver's Permit and vehicle databases:

> "The purpose of law enforcement agencies is that of the access to information for the issuance of tickets. So, they have real-time access to the Licensing database… If somebody presents a fraudulent DP to a law enforcement officer, they could find that immediately" (Management Interview #4).

Field officers similarly emphasized how real-time data transformed roadside interactions. During one observation, an officer checked a driver's record on the spot, "…I accessed his driver's permit number and date of birth. All the information came up — license classes, prior tickets, and notices for demerit points" (Field Officer, Ethnographic Interview #1). Another field account noted how Notices of Intent could be printed and served immediately once confirmation

was received from the Command Centre, ensuring timeliness and closing gaps that previously delayed enforcement (Field Notes, Oct 11, 2023).

These examples show that real-time access not only improved efficiency but also shifted authority, decisions once delayed or reliant on incomplete files could now be taken confidently, backed by verifiable records in the moment. Managers also pointed to broader impacts, such as the recovery of stolen vehicles after more than a decade, made possible through real-time cross-checking of records.

However, participants also acknowledged ongoing challenges. Real-time access depends on the accuracy of data input, and errors can undermine its reliability:

> "…persons put forward representations saying they never got tickets, but the system shows otherwise. At the end of investigations, it may have been a duplicated permit; an officer taking a 6 for a 9; an officer inputting the incorrect vehicle details, or various issues" (Management Interview #4).

This recognition tempers the assumption that real-time access automatically produces better decisions. Instead, it highlights the need for careful training, auditing, and interpretive work to ensure data are used effectively.

These findings show that real-time data access has reconfigured decision-making practices by centralizing information, empowering officers with instant verification tools, and strengthening the credibility of roadside enforcement. Yet its effectiveness is contingent on data integrity and user proficiency, showing that technology alone does not resolve all decision-making challenges.

5.1.3.2 Audit Trails to Continue the Process of Decision-making

A central innovation of the UTurn system was the embedding of audit trails, which managers described as a way of making decision-making processes traceable and accountable. Unlike the former paper-based environment, where files could be misplaced or records manipulated, audit trails ensure that every interaction with the system is logged and identifiable.

As one manager explained:

> "I think what I have observed… what I have noticed with all the agencies that utilize this new system… they are very mindful and exercise a high level of due care as it relates to access for information or performing their tasks. Because we built a system that traps and traces and audits every single thing that is done, persons appear to be much more serious and proficient in terms of what they do" (Management Interview #1).

This account suggests that audit trails are not merely technical logs but also act as disciplinary tools, encouraging staff to exercise greater diligence in their work. The awareness that actions could be monitored created what managers described as a culture of seriousness and accountability. Managers also provided concrete examples of how audit trails supported oversight:

> "If an enforcement officer… issues a ticket with an electronic device, any mistakes can be easily picked up and audited and could be addressed by their supervisor. Persons exercise due care because a page from a ticket book can no longer go missing, because they know exactly who would have issued that ticket" (Management Interview #1).

Another noted that audit trails extended into administrative processes, ensuring that both the act of registering vehicles and issuing sanctions could be verified:

> "…we can now track and trace that this transaction was done by this individual. So, one could now benchmark the written policy and see if the electronic behaviour conforms with that policy. As a result of that, we are seeing fewer challenges of wrongdoing within the organization" (Management Interview #1).

From the enforcement side, managers emphasized how timestamps and user IDs eliminated the possibility of backdating or manipulating records:

> "…everything that persons… every click they make on that system is recorded in an audit trail. If any discrepancies take place, it is easily identifiable, because we know who did what. There is a trail of it… with a name stamp and a time stamp, so you can't tell me you imposed it two weeks ago when it says you only did it today" (Management Interview #4).

Together, these excerpts explain how audit trails were experienced as mechanisms of control and legitimacy, they allowed managers to identify errors, hold staff accountable, and demonstrate compliance with legal and procedural standards. At the same time, managers acknowledged that audit trails did not eliminate all challenges, they recorded what happened but not necessarily why, and thus still required interpretation. As one manager cautioned, "…where there is human interaction with any ICT system, there will be errors. But the thing is, the audit trails and the timestamps allow us to track these things" (Management Interview #4).

In instances where discrepancies were realized, either through system notification or user observation, consultation took place between senior management, the staff member responsible for system oversight and the person who may have committed the error. Through discussion, decisions would be made to correct the error, which would have required management overriding

the system and that too would be logged. Ergo, the error, the change, the reason for the change and the person making the change become part of an auditable record.

This recognition tempers the assumption that audit trails automatically ensure objectivity, instead, they must be read as performances of accountability, demonstrating traceability and seriousness while still depending on human judgment for interpretation and resolution.

5.1.3.3 Performance Metrics and Accountability

The UTurn system not only introduced audit trails but also produced performance metrics that managers framed as central to accountability. These metrics allowed leaders to evaluate outputs, measure behavioural change, and present evidence of effectiveness to both internal and external stakeholders. Unlike the previous paper-based environment, where oversight was anecdotal or incomplete, the digital system generated quantifiable indicators of transactions, enforcement activity, and trends in driver behaviour.

Managers described how these measures were now linked directly to organizational performance:

> "…we can see it, one, by the output in terms of the number of transactions we cover per day, renewals, vehicle registrations, change of ownership… and the ease of the way staff can now do business through the technology and the level of integration, we see a difference in behaviour in terms of how the staff reacts" (Management Interview #1).

Beyond internal outputs, metrics were also presented as key performance indicators (KPIs) tied to public outcomes, year-to-year comparisons of violations and accident rates were used to assess whether the system was producing deterrence and behavioural change:

> "When we do our year-to-year comparison, if we see a reduction in terms of particular traffic violations, we know that there is a change in driving behaviour happening. Some people still take the chances on days of high traffic, but yes, that has definitely been a deterrent. So, we did see a reduction. That is actually one of our KPIs. The reduction in road traffic accidents, reduction in road traffic fatalities, that is also a clear indication for us that there are aspects of the system that are working" (Management Interview #4).

Managers also noted that these data were not limited to Licensing Division use, the police frequently requested performance data for benchmarking, "…I get emails many times from the TTPS inquiring of data, so that they could now more or less use that to benchmark performance of the police station, of the zone they work with, even down to the officer" (Management Interview #1).

These requests demonstrate how metrics circulated beyond the Licensing Authority, supporting decision-making and accountability across institutions. Such practices are exemplified by periodic statistical reports generated by the system. For example, the system produced a notice issuance report for 2023, as seen in Figure 13, illustrating the frequency of offences by category:

Notice Issuance By Category Report / Trinidad and Tobago Police Service (TTPS) / 2023-01-01 - 2023-10-06

#	Offence	Occurrence Count
1	Failure of a driver and any passenger seventeen years and over to wear a seat belt while the vehicle is in motion	11,795
2	Breach of Traffic Signs	5,679
3	Exceeding the specified speed limit—by 10 to 20 km per hour	4,917
4	Driving while holding or using a hand held mobile device	4,004
5	Using or causing to be used or permitting a person to use a motor vehicle or licenced trailer on a public road without a valid policy of insurance	3,354
6	Vehicle with defective fittings	2,893
7	Failure to produce a vehicle for inspection/Driving a vehicle without a valid inspection sticker and certificate	2,873
8	No identification lights for the illumination of identification marks on vehicle at night	2,350
9	Driving a vehicle with a person in the front seat who is not wearing a seat belt	2,238
10	Failing to comply with a traffic sign or notice authorised by the Licensing Authority or Commissioner of Police, respectively	2,044
11	Improper overtaking on the left side of the road	1,763
12	Use of vehicle with defective tyres	1,566
13	Exceeding the specified speed limit—by 21 to 30 km per hour	1,499
14	Failing to comply with a traffic light signal	1,300
15	Vehicle without two head lamps	1,159
16	Parking within nine metres of a corner	1,099
17	Parking in a public stand appointed for taxi	1,030

Figure 13. *System-Generated Report from the UTurn System Highlighting Trinidad and Tobago Police Service (TTPS) Issuances of Tickets by Offence Category, January–October 2023.*

The highest reported offences were failure to wear seat belts (11,795); breach of traffic signs (5,679); and speeding within the 10–20 km/h range (4,917). These types of reports

quantified enforcement outcomes provided benchmarks for deterrence strategies, and informed both internal evaluations and public narratives about system performance.

At the same time, managers acknowledged limitations, quantitative outputs could measure volume but not necessarily fairness or quality. As one observed, "…we can have a greater level of enforcement to treat with the matter. It's not about tickets, but about the fact that we can have a greater level of enforcement to treat with the matter" (Management Interview #1).

This recognition reflects a broader theme, performance metrics function as measures of accountability, they provide visible, quantifiable outputs that can be mobilized to demonstrate effectiveness, but their meaning still depends on interpretation and contextual judgment.

5.1.4 Organizational and Cultural Shifts

The introduction of the UTurn as a frontier technology demanded not only legislative alignment and administrative restructuring but also deep organizational and cultural change. By embedding digital processes into everyday practices, the UTurn redefined how Licensing staff performed their roles, how decisions were made visible, and how the institution presented itself to the public.

Managers highlighted that the presence of audit trails and system monitoring reshaped workplace culture, making staff more conscious of their responsibilities and accountability:

> "…they are very mindful and exercise a high level of due care as it relates to access for information or performing their tasks. Because we built a system that traps and traces and audits every single thing that is done, persons appear to be much more serious and proficient in terms of what they do" (Management Interview #1).

Audit trails also served as a disciplinary mechanism for enforcement officers, ensuring diligence and minimizing opportunities for misconduct:

> "If an enforcement officer… issues a ticket with an electronic device, any mistakes can be easily picked up and audited and could be addressed by their supervisor. Persons exercise due care because a page from a ticket book can no longer go missing, because they know exactly who would have issued that ticket" (Management Interview #1).

Yet cultural change was uneven, some employees opposed abandoning familiar practices, and adaptation required sustained monitoring and training, "…some officers still find it hard, they were accustomed to paper, to a way of doing things. It takes training and monitoring to really bring everyone along" (Management Interview #2).

These perspectives show that the UTurn's role as a frontier technology extended beyond automation, it transformed the culture of accountability by requiring staff to adapt to traceability and standardization, while also challenging long-standing habits and expectations. The Transport Division's modernization was therefore both a technological achievement and a cultural negotiation, one that highlighted the tensions between innovation and adaptation.

5.1.4.1 Shift in Organizational Priorities

The introduction of the UTurn prompted a significant reorientation of organizational priorities within the Licensing Authority. No longer confined to transactional processing and paper-based record-keeping, the institution shifted toward strategic management of information, efficiency, deterrence, and legal credibility, aligning its internal goals with wider public expectations of accountability and safety.

Managers framed this change as a process of business reengineering rather than minor adjustments. One senior leader explained:

> "Well, from the organizational goals, one of the things we saw, and we expected to achieve was business processes reengineering. We had to reengineer the way we do things, and by that, I mean a total new overhaul and implement totally new systems. A number of our systems, we had to work on business processes modification, changing minor things to achieve proper data integrity and efficient workflows. Those were some of the goals, as the organization, we had to put in place" (Management Interview #1).

This reorientation was not limited to internal workflows but also reshaped who drove organizational change. Middle and junior managers, more comfortable with digital tools, became central actors in driving reforms:

> "…on the other hand, which is a strength for me, and I am happy about, is that more staff on middle management and junior management, they are the ones who are really driving the organizations with the change and doing an excellent job. But when it comes to the core aspects, to be able to now designate responsibility that utilizes technology, that is a challenge we have. That is something I know will fix itself in the years to come because of the younger ones who are coming up will now take that role. Therefore, somebody has to face the difficult times with it now, and I am prepared to bear that cost" (Management Interview #1).

Leadership also emphasized how technological integration reshaped organizational priorities, with the Transport Commissioner embedding IT into nearly every process:

> "…one of the positives under the new leadership of the Licensing Division, because the Transport Commissioner is an IT person, so he understands technology and what he is trying to do is to integrate the use of technology into everything that Licensing is doing,

> from the digitization of documents, so we are moving from a paper-based system to now primarily electronic based system, and I think that is working for the efficiency of the organization, in terms of how it operates and in terms of turnover times, because at the snap of a finger, you can pull persons records" (Management Interview #2).

Managers also stressed that shifting priorities meant addressing past vulnerabilities in core processes, particularly around data integrity and legal compliance:

> "If we are talking about cultural change, persons may have been involved in illegal practices in terms of issuing those two core products, Driver's Permits and registering vehicles, so therefore we have to ensure that those key products are sanitized into the input phase, as well as the persons who now utilize those products, meaning now the driver himself, as well as the vehicle, those data are more or less accurate to the enforcement officer. At the onset, you would find yourself losing cases in court if those things are not properly registered into your system" (Management Interview #1).

This reflection highlights how organizational priorities extended beyond efficiency and modernization to include credibility and enforceability. For managers, ensuring the accuracy and legitimacy of core data became a prerequisite for sustaining reforms and avoiding legal setbacks.

Finally, the emergence of the Traffic Enforcement Center Unit was described as a tangible symbol of shifting priorities, a unit dedicated to data-driven enforcement and the first of its kind in the Caribbean:

> "I think the Traffic Enforcement Center, which is the unit that really manages the operations and that leans the most on the use of the technology, it is the first of its kind in the Caribbean, so there is no other Traffic Enforcement Center, and the work of the

> Traffic Enforcement Center really comes out of the UTurn system" (Management Interview #2).

Based on these findings, the UTurn functioned as more than a technical tool, it redefined the Division's priorities by emphasizing efficiency, compliance, and deterrence over routine administration. At the same time, the reorientation was not seamless: managers acknowledged ongoing challenges in delegating responsibility, ensuring older staff adapted to new methods, and balancing long-standing duties with newly emergent technological priorities.

5.1.4.2 Continual Learning and Adaptation

The implementation of the UTurn required the Licensing Authority and its partners to embrace continual learning as a core organizational practice. Rather than treating the system as a static solution, managers emphasized the need for ongoing adaptation, iterative improvements, and training to sustain its effectiveness.

A central theme was the role of information and transparency in driving adaptation. As one senior manager explained:

> "One of the things with having to change that type of behaviour, one needs information. We need to be able to gather trends; gather statistics, as well as put a higher level of transparency and accountability into our systems. Those are the key factors that we believe are necessary for change within the organization" (Management Interview #1).

This approach underscored that change was not simply about introducing technology but about building feedback loops that made it possible to monitor practices, identify weaknesses, and adjust accordingly.

Managers also stressed the importance of integration across agencies. The UTurn system facilitated collaboration and data-sharing that had previously been difficult to achieve:

> "I think one of the really successful things about the UTurn system is the connectivity it creates across Government. So, the UTurn system has connected Licensing Division, the Judiciary, TTPS and TTPost. And it feeds information and makes it much easier for traffic matters and licensing matters and the ticketing system to work" (Management Interview #2).

At the same time, the process of continual learning was marked by tension. Staff who had worked in the organization for over two decades were often reluctant to abandon engrained paper-based methods as one senior manager admitted:

> "The training we would have put forward did not create the impact we wanted at that level. Most of them [long-serving staff] were recruited over the years with criteria that do not match the standard on which the organization has operated, and they may not have developed that over the years in their personal development. That is a major challenge for me as Commissioner" (Management Interview #1).

This generational divide meant that middle and junior managers carried much of the responsibility for innovation:

> "…more staff on middle management and junior management, they are the ones who are really driving the organizations with the change and doing an excellent job. But when it comes to the core aspects, to be able to now designate responsibility that utilizes technology, that is a challenge we have" (Management Interview #1).

Tension was not only cultural but also emotional, as some employees felt less competent when moving from paper to digital systems:

> "…if I have become so proficient in using a pen and now you are giving me a keyboard, which I am not accustomed to, that is a small change. You have slowed down my work. I could make so many errors… and then I feel less proficient as a clerk" (Management Interview #3).

These challenges meant that training had to be continuous rather than one-off, with strong HR support and careful onboarding of staff:

> "Sometimes it takes one shift in staff who may not be properly trained as to what the new processes are, [and that] could create a serious domino effect with customer fallout and even the system itself. So therefore, what we had to do is to ensure that each staff who we have placed into our environment is properly oriented into our processes" (Management Interview #1).

These findings highlight that the UTurn's success was not solely due to automation, but to the institutionalization of continual learning, through integration across agencies, feedback loops with stakeholders, and retraining within the Licensing Division. Importantly, this process was not seamless, it required overcoming entrenched habits, addressing generational divides, and ensuring that opposition was met with support and sustained training.

5.1.5 Transformation Of Work Practices

The advent of the UTurn did not merely automate existing functions but required a reconfiguration of how work was organized, executed, and accounted for. Transformation was

evident in the shift from paper-based, discretionary practices to standardized, digital workflows that emphasized consistency, traceability, and accountability.

One of the first priorities was digitizing existing paper-based records to address long-standing vulnerabilities in accuracy and duplication:

> "…the first things we had to do: one, digitize our data. That is number one. Two, be able to find mechanisms to treat with duplicates. That is our biggest nightmare: two persons having the same Driver's Permit and having the same vehicle registered twice… we had to digitize the data with the aim of sanitizing the data" (Management Interview #1).

The scale of this task underscored the magnitude of transformation, requiring the capture of hundreds of thousands of paper-based records:

> "We had to more or less capture that data from handwriting. As well, we are talking about data in the hundreds of thousands… over one million vehicles registered… over 600,000 persons who had Driver's Permits… it was a lot of work, in terms of getting the digitization done" (Management Interview #1).

Beyond data entry, the UTurn reconfigured workflows through standardization and policies, replacing discretionary and inconsistent practices across sites with uniform procedures. The introduction of the UTurn did more than streamline tasks; it shifted the architecture of organizational authority itself. Where staff once exercised considerable discretion over paper-based processes, the digital workflows redistributed this authority toward system-generated rules, automated checks, and digitized verification. In practice, the system became an arbiter of validity and compliance, reducing the latitude of individual clerks while strengthening managerial

oversight through real-time traceability. This reconfiguration embedded authority within technological processes, making the legitimacy of decisions less dependent on personal judgment and more on adherence to standardized protocols. In doing so, the UTurn reshaped who (or what) holds decision-making power within the Licensing Division and on what basis that power is enacted:

> "We were able to treat with it, one, by basically setting standards and policies in terms of what is required… the introduction of desk manuals, giving staff the guide as to the way of doing things; ensuring there is synergy across the different nine sites…" (Management Interview #1).

For frontline services, this meant everyday tasks were no longer manual or redundant. The use of ledgers, once an entrenched part of practice, was replaced by real-time digital records:

> "…if you come to Licensing to renew your Driver's Permit… every single person… had to be entered in a ledger still, a manual ledger… This new system basically removed that from the environment. From the time you sign for your Driver's Permit on the electronic system, that builds the ledger, so there is no need to write" (Management Interview #1).

Efficiency gains were visible in service delivery, tasks such as issuing tickets, which previously took several minutes, were reduced to under two minutes, while integration with courts and payment platforms ensured faster processing of fines and penalties. These changes reflected a broader movement toward real-time, traceable, and automated workflows.

Yet, the transformation of work practices was not without disruption. Long-serving staff often struggled to adapt to new routines, with some reporting frustration at a loss of proficiency,

"…if I have become so proficient in using a pen and now you are giving me a keyboard, which I am not accustomed to… you have slowed down my work. I could make so many errors… and then I feel less proficient as a clerk" (Management Interview #3).

This tension revealed that transformation was not simply technical but cultural, replacing familiar manual practices with digital systems required employees to unlearn habits, retrain, and rebuild confidence in their roles. The transformation of work practices demonstrated how the UTurn embedded new forms of standardization, traceability and efficiency while simultaneously producing friction and tension. The system did not merely digitize old processes, it reconfigured the way work was imagined and enacted, linking everyday practices more tightly to accountability, legal compliance, and public trust.

5.1.5.1 Standardization of Processes and Efficiency

One of the most notable effects of the UTurn was the move toward greater standardization and efficiency in how the Licensing Authority operated across its multiple sites. What had previously been fragmented, inconsistent, and often dependent on the discretion of individual officers was gradually replaced by uniform procedures, desk manuals, and digital systems that ensured more predictable and accountable practices.

Managers consistently highlighted the role of formalized policies and manuals in achieving this shift. As one senior leader explained:

> "We were able to treat with it, one, by basically setting standards and policies in terms of what is required… the introduction of desk manuals, giving staff the guide as to the way of doing things; ensuring there is synergy across the different nine sites…" (Management Interview #1).

This reconfiguration not only ensured that processes were consistent across locations but also reduced the risk of arbitrary decision-making. Standardization meant that citizens could expect the same treatment whether they visited Port of Spain, San Fernando, or any of the other Licensing offices.

Efficiency was also redefined through automation of once-manual practices, tasks that previously required time-consuming data entry into ledgers were integrated directly into digital workflows:

> "…if you come to Licensing to renew your Driver's Permit… every single person… had to be entered in a ledger still, a manual ledger… This new system basically removed that… From the time you sign for your Driver's Permit on the electronic system, that builds the ledger, so there is no need to write" (Management Interview #1).

These changes were not only about speed but about accuracy and traceability. A standardized digital record eliminated the inconsistencies and errors common in handwritten records, ensuring that the data generated by frontline staff was consistent and available for monitoring and audits.

However, managers were clear that standardization depended on staff buy-in and training. A lack of orientation or failure to follow the new protocols could produce inefficiencies or even system breakdowns:

> "Sometimes it takes one shift in staff who may not be properly trained as to what the new processes are, [and that] could create a serious domino effect with customer fallout and even the system itself. So therefore, what we had to do is to ensure that each staff… is properly oriented into our processes" (Management Interview #1).

This reflection shows that efficiency gains were not automatic but contingent on continuous reinforcement of standards. Manuals and protocols provided structure, but it was through training and monitoring that standardization took hold.

These findings help show that the UTurn transformed efficiency into a matter of organizational alignment and accountability, not just faster service delivery. Standardization reduced the discretion of individual clerks, created uniform expectations across sites, and made organizational performance more transparent. Yet, this transformation also required sustained investment in orientation, training, and oversight to prevent lapses that could undermine efficiency.

5.1.5.2 Workforce Adaptation and Training

The success of the UTurn depended not only on the introduction of technology but also on the capacity of the workforce to adapt. Training and reorientation were essential in embedding the reforms, but the process revealed uneven results across different segments of staff, exposing generational divides, unwillingness to conform, and varying levels of proficiency. Managers acknowledged that initial training efforts did not always meet expectations, for long-serving staff, adaptation was particularly challenging because recruitment standards in earlier years had not emphasized digital literacy:

> "The training we would have put forward did not create the impact we wanted at that level. Most of them [long-serving staff] were recruited over the years with criteria that do not match the standard on which the organization has operated, and they may not have developed that over the years in their personal development. That is a major challenge for me as Commissioner" (Management Interview #1).

By contrast, middle and junior managers were described as the drivers of organizational change, more willing and able to adapt to technological reforms:

> "…on the other hand, which is a strength for me and I am happy about, is that more staff on middle management and junior management, they are the ones who are really driving the organizations with the change and doing an excellent job…" (Management Interview #1).

At the frontline level, the shift from pen-and-paper to digital systems was experienced as disruptive. Clerks who had built confidence and proficiency in manual practices expressed frustration and reduced efficiency when asked to adopt keyboards and digital inputs, "…if I have become so proficient in using a pen and now you are giving me a keyboard, which I am not accustomed to… you have slowed down my work. I could make so many errors… and then I feel less proficient as a clerk" (Management Interview #3).

These tensions reveal that the digital transition required significant cultural negotiation and emotional labor from staff. Long-serving employees, whose professional identity was built on mastery of manual processes, had to confront a sudden loss of competence and status as the value of their expertise shifted. This produced emotional strain, frustration, and in some cases diminished confidence, a phenomenon not typically captured in technical accounts of digital reform. Adapting to the UTurn demanded that workers unlearn practices they had refined over decades while simultaneously managing the anxiety of potential errors, public scrutiny, and altered performance expectations. As a result, digital transformation became not only an operational shift but a renegotiation of workplace identity, belonging, and professional worth.

> "Sometimes it takes one shift in staff who may not be properly trained as to what the new processes are, [and that] could create a serious domino effect with customer fallout and even the system itself. So therefore, what we had to do is to ensure that each staff… is properly oriented into our processes" (Management Interview #1).

These perspectives highlight that workforce adaptation was not a one-time exercise but an ongoing negotiation between technology, training, and organizational culture. The reform demanded not only technical skills but also a willingness to unlearn established practices and embrace new standards of accountability. In this sense, the UTurn became a catalyst for re-skilling the workforce, even as it exposed divisions in readiness and capacity across the organization.

5.1.5.3 Role Evolution Within the Organization

The introduction of the UTurn reconfigured organizational responsibilities and reshaped the distribution of authority, roles that once relied on discretion and manual processes were redefined around digital accountability, while new positions emerged to manage data-driven enforcement and technological integration.

One clear area of role evolution was among frontline clerks, who shifted from exercising discretion over paper-based transactions to standardized digital processing. For some, this transition reduced the sense of professional competence, "…if I have become so proficient in using a pen and now you are giving me a keyboard, which I am not accustomed to… you have slowed down my work. I could make so many errors… and then I feel less proficient as a clerk" (Management Interview #3).

At the same time, middle and junior managers assumed a more prominent role in advancing reforms. Their comfort with technology positioned them as drivers of change within

the institution, "…more staff on middle management and junior management, they are the ones who are really driving the organizations with the change and doing an excellent job…" (Management Interview #1).

Leadership roles also evolved as technology became central to organizational oversight. The Transport Commissioner's IT expertise was described as shaping a broader redefinition of authority, embedding digital governance into the very core of the Licensing Division:

> "…one of the positives under the new leadership of the Licensing Division, because the Transport Commissioner is an IT person, so he understands technology and what he is trying to do is to integrate the use of technology into everything that Licensing is doing…" (Management Interview #2).

In addition to reconfigured existing roles, the UTurn gave rise to new organizational units and positions. The establishment of the Traffic Enforcement Center Unit represented a tangible restructuring of the Division, dedicated to the ongoing use of technology for enforcement and monitoring, "I think the Traffic Enforcement Center, which is the unit that really manages the operations and that leans the most on the use of the technology… the work of the Traffic Enforcement Center really comes out of the UTurn system" (Management Int #2).

These developments reinforce that the UTurn was not only a technological reform but also an organizational one. Clerks, managers, and leaders each experienced shifts in responsibilities, with authority redistributed toward oversight, digital monitoring, and enforcement. The evolution of roles reflected broader cultural and structural changes in the organization, where legitimacy and accountability were now embedded in the day-to-day enactment of work.

Taken together, these findings demonstrate that the introduction of the UTurn system reconfigured the Licensing Division at multiple, interconnected levels: technical, cultural, and organizational. The shift from paper-based systems to standardized digital protocols redistributed authority, constrained individual judgment, and strengthened data-driven oversight. Efficiency improvements alone did not define the transformation; they were embedded within broader negotiations around competence, and legitimacy, as staff navigated the emotional and cultural demands of unlearning familiar routines and adopting new forms of accountability.

Workforce adaptation emerged as both a technical and relational process, shaped by generational differences, organizational expectations, and shifting understandings of a new professional outlook undergirded by legislative change. New roles, units, and governance mandates crystallized around the new reality of digital enforcement, which further embedded technology into the everyday practices of organizational work. Collectively, these changes reveal that UTurn was not a standalone technological intervention but a catalyst for deep sociotechnical restructuring, reshaping how work is done, who holds authority, and how the organization imagines and performs public service.

5.2 Reconfiguring Decision-Making: Interconnectivity, Automation, and Legal Constraints (RQ 2)

Having examined how the UTurn reshaped organizational practices and cultural dynamics within the Licensing Authority, this section now turns to the second research question, which focuses on how decision-making processes were reconfigured through the system. Unlike the preceding analysis, which drew primarily on interviews with senior management, this section relies on data generated through the Traffic Enforcement Centre Unit (TECU). The findings, detailed in Appendix C, comprised of ethnographic interviews, observation/shadowing, field

notes and pictures, show administrative staff engaged with the UTurn in real time, and how their practices of decision-making were shaped by automation, traceability, and legislative mandates

5.2.1 UTurn Use Framed by the Law

The UTurn system is not only a technological intervention but one explicitly framed by law, its authority and legitimacy derive from the *Motor Vehicles and Road Traffic Act (Chapter 48:50; Act No. 9 of 2017; Act No. 15 of 2020)*, which provides the statutory basis for fixed penalties, demerit points, and disqualification procedures. By embedding these legislative provisions into everyday operations, the UTurn made the law a living framework for decision-making, ensuring that each action was traceable to legal authority.

Managers consistently emphasized that the Act served as the organization's standard operating procedure. As one explained, "…the Act, the *Motor Vehicles and Road Traffic Act 48:50, 9 of 2017, 15 of 2020*, those are our guiding documents. In the grand scheme of things, those are our standard operating procedures" (Management Int #4).

As another manager recalled, when the project was introduced, it was never sold as a technology project but as a legislative reform aimed at road safety and compliance:

> "When we started promoting the project, it was not promoted from a technology-based implementation strategy per se. We started talking about basically the benefits of implementing a new demerit point system and traffic management system to create safer roads in Trinidad and Tobago" (Management Int #2).

Frontline staff at the Traffic Enforcement Centre also underscored that the law structured their day-to-day practices. Sanctions, for example, could not be imposed without proper notification and statutory approval, "We would generate the Notice of Intended Disqualification, because the law states that we can't disqualify without having notified, and we can't disqualify…

without having the Transport Commissioner indicate reasons why the person is disqualified" (TECU Interview #1).

Observations confirmed that decision-making was triangulated across system data, the Act, and departmental procedures, reinforcing legal cohesion in operational practices (TECU Field Notes 1). Yet, this reliance on law also exposed vulnerabilities. Staff pointed to instances where sanction letters were generated without proper notification, which they recognized as unconstitutional and legally unenforceable (TECU Field Notes 1).

The UTurn's legal authority is embedded directly into everyday work, by grounding practices in the *Motor Vehicles and Road Traffic Act*, the system produced legitimacy and traceability. Compliance with the law, rather than technology alone, remained the ultimate source of authority.

5.2.1.1 Integrated and Interconnected systems

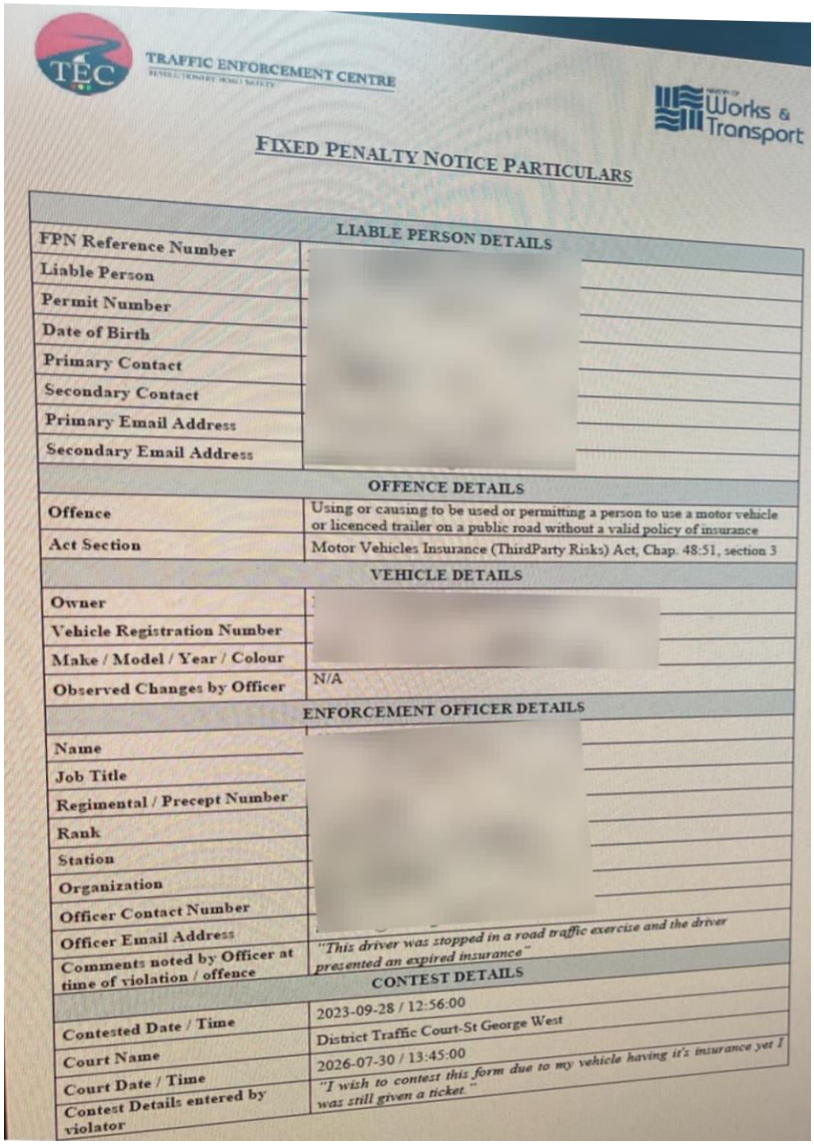
The UTurn system operates as both a technological platform and an organizational connector, linking multiple state entities that together constitute the enforcement network of road traffic governance in Trinidad and Tobago. Participants described its architecture as part of an emerging government-wide infrastructure that enables real-time information sharing across agencies. One interviewee expressed this aspiration clearly:

> "My hope is always that at some point, there is some sort of interconnectedness with Government technology… yes, we have TTPS as a ticketing agency, but what does this system look like where it is able to notify an officer on the road, when they stop him for a ticket, without having to use a secondary system, that this person has a warrant?" (TECU Interview 1).

The statement points to a vision of seamless integration where enforcement, judicial, and administrative systems communicate instantly through shared data. This ambition is grounded in a broader government initiative of using technology for efficiency, the same participant added, "The system is so easy. You are accessible to law enforcement right now, as it stands, with just the technology that we have provided. So, we need to conceive of how best to make this work for as many agencies as possible, without necessarily causing the Government much more expenditure" (TECU Interview 1).

Integration, then, is not only a technical aspiration but a fiscal and administrative strategy. Within TECU, integration takes practical form through continuous communication with external stakeholders such as the Judiciary, the Licensing Authority, and the Police. One employee explained that court officers "have access to all the information that we have access to… however, they still need a person from here to tell them, 'This person has filed a notice to contest, and this is the time, date and place that they have to appear in court'" (TECU Interview 2)**.** Despite digital access, legal procedure still requires confirmation by a human intermediary, which preserves adherence to the legislation, ensuring human communication inside an otherwise automated environment. Staff noted that this dependence produces constant back-and-forth exchanges: "Usually if it is that we realize this court matter is coming up and we did not send through the information, this is how we know for sure that they could see exactly what we are seeing, because they contact us now, 'This person is supposed to have a court date on this date at this time and we have no documents. Can you please forward them'" (TECU Interview 2).

Figure 14 shows a screenshot of the document sent between the TECU and the Judiciary.



TRAFFIC ENFORCEMENT CENTRE

Ministry of Works & Transport

FIXED PENALTY NOTICE PARTICULARS

LIABLE PERSON DETAILS	
FPN Reference Number	
Liable Person	
Permit Number	
Date of Birth	
Primary Contact	
Secondary Contact	
Primary Email Address	
Secondary Email Address	
OFFENCE DETAILS	
Offence	Using or causing to be used or permitting a person to use a motor vehicle or licenced trailer on a public road without a valid policy of insurance
Act Section	Motor Vehicles Insurance (ThirdParty Risks) Act, Chap. 48:51, section 3
VEHICLE DETAILS	
Owner	
Vehicle Registration Number	
Make / Model / Year / Colour	
Observed Changes by Officer	N/A
ENFORCEMENT OFFICER DETAILS	
Name	
Job Title	
Regimental / Precept Number	
Rank	
Station	
Organization	
Officer Contact Number	
Officer Email Address	
Comments noted by Officer at time of violation / offence	*"This driver was stopped in a road traffic exercise and the driver presented an expired insurance"*
CONTEST DETAILS	
Contested Date / Time	2023-09-28 / 12:56:00
Court Name	District Traffic Court-St George West
Court Date / Time	2026-07-30 / 13:45:00
Contest Details entered by violator	*"I wish to contest this form due to my vehicle having it's insurance yet I was still given a ticket."*

Figure 14. *Fixed Penalty Notice Particulars*

These interconnections extend beyond the Judiciary, officers across agencies rely on TECU for verification, and many call to retrieve documents or evidence they can no longer locate in their own systems. “They are calling to ask for the documents to help them with their case files that they have to prepare to go to court… they can’t necessarily find back the ticket information from when they would have issued it, let’s say two to three years ago” (TECU

Interview 2). The persistence of such requests demonstrates that integration is still partial, technical connections coexist with uneven bureaucratic processes.

The desire for more direct interoperability is accompanied by a recognition of the limits imposed by law. When asked how expanded access might affect daily work, one employee explained that broader training and authorization in external agencies "will lessen the number of persons calling for whatever extra information that they would need," freeing staff to focus on scheduled tasks instead of repeated inquiries. The employee later acknowledged, "the two systems (UTurn & Judiciary Information Management System) could talk—but [they] still need that human element to perform this task of, 'This is the information,' and then somebody saying, 'Yes, we acknowledge that we have received this'" (TECU Interview 2). Automation can connect databases, but the law still requires a voice, a name, and acknowledgment.

At the same time, TECU staff remain vigilant about the potential for misuse, a field note recorded that when "a motorist submitted a foreign permit for a stop, a staff member cross-checked the information using TIPS (Transport Integrated Permit System) to verify authenticity, revealing attempts by drivers to exploit gaps between interconnected databases" (Field Notes Observation 4). Each connection between systems thus creates both new efficiencies and new vulnerabilities that require human oversight.

For many within TECU, the ideal future is a hybrid one, what one participant called "some sort of hybrid," where field enforcement, administrative processing, and policy oversight converge through technology without erasing the human element (TECU Interview 1). Integration, in this sense, is not merely about connecting machines, it is about coordinating practices across multiple domains of the state.

5.2.1.2 Compliance and Legal Oversight

The UTurn system operates within a rigid legal framework that dictates every aspect of its design and use. Staff consistently emphasized that their work is bounded by legislation, particularly the *Motor Vehicles and Road Traffic Act* (See Appendix F for examples), which determines how sanctions are applied and validated. As one employee explained,

> "We would generate the Notice of Intended Disqualification, because the law states that we can't disqualify without having notified, and we can't disqualify, in furtherance of that, without having the Transport Commissioner indicate reasons why the person is disqualified" (TECU Interview 1).

Here, automation functions as a procedural aid rather than a source of discretion; every digital action must correspond to a legal requirement.

This relationship between law and technology shapes how authority is expressed in daily practice. The same participant described how they communicate this logic to citizens:

> "I explain that to people all the time. They are like, 'Okay, so why does it have the demerit points?' I am like, 'Okay, you have a fine for breaking the law. The demerit points are supposed to help you to watch your behavior. This is the law, and you have broken the law. Render unto Caesar that which is Caesar's. You want to keep collecting demerit points? Okay, it comes at a consequence.' And I realize that our people are not particularly fond of consequences" (TECU Interview 1).

The quote reveals how compliance is performed communicatively; staff act as interpreters of the law, translating statutory language into moral and behavioral reasoning for citizens who encounter the system through its penalties.

Despite the automation of correspondence, many processes remain dependent on human confirmation. One interview captured this interplay clearly:

> "Basically, yes, just because a person has to tell them, an actual physical person has to tell them this is the information." The researcher clarified, "So, your email does not go to a random place, it goes to another person?" The response: "Directly to another person … who then has to say, 'I acknowledge receipt'" (TECU Interview 3).

Such exchanges underscore that even digitally generated case files require human acknowledgment to be legally valid. The law demands a named person, to authenticate each transaction, sustaining a human chain of accountability within automated procedures.

Notes from observations confirm that this legal dependence is woven into daily practice. Staff routinely refer to the Act to verify that their decisions remain within its bounds. "There is a triangulation in decision making, relying on the system generated information, reference to the law and departmental practices to ensure that there is as much cohesion in the decision making as possible" (Field Notes Observation 1). The UTurn's authority is contingent on legal compliance; the system can act only as far as the law allows it to act.

These constraints extend to senior roles within the organization, only the Transport Commissioner possesses the legal authority to disqualify a driver, a limitation that has rendered his position "more administrative" as he authorizes decisions generated elsewhere in the system (Field Notes Observation 3). Such redistribution of responsibility reflects the system's dual function as an instrument of efficiency and a mechanism of control under law. At the same time, automation has become a tool for mitigating corruption and standardizing oversight in an environment long susceptible to informal practices (Field Notes Observation 2).

Legal strictness also creates practical challenges, the law requires that all documents submitted to the Judiciary be in writing, so “all the information produced by the system must be downloaded by the TECU staff and sent to a corresponding staff at the Judiciary” (Field Notes Observation 4). Although the two systems communicate electronically when assigning court dates or recording payments, human intervention remains legally necessary for transmission (See Figure 15). The law has even been “tested around how notifications should take place before disqualification, so some drivers are avoiding signing for documents to avoid receipt” (Field Notes Observation 3). To address this, staff have suggested that future revisions could introduce push notifications as a legally recognized form of notice, an innovation that would require the law itself to evolve alongside the technology.

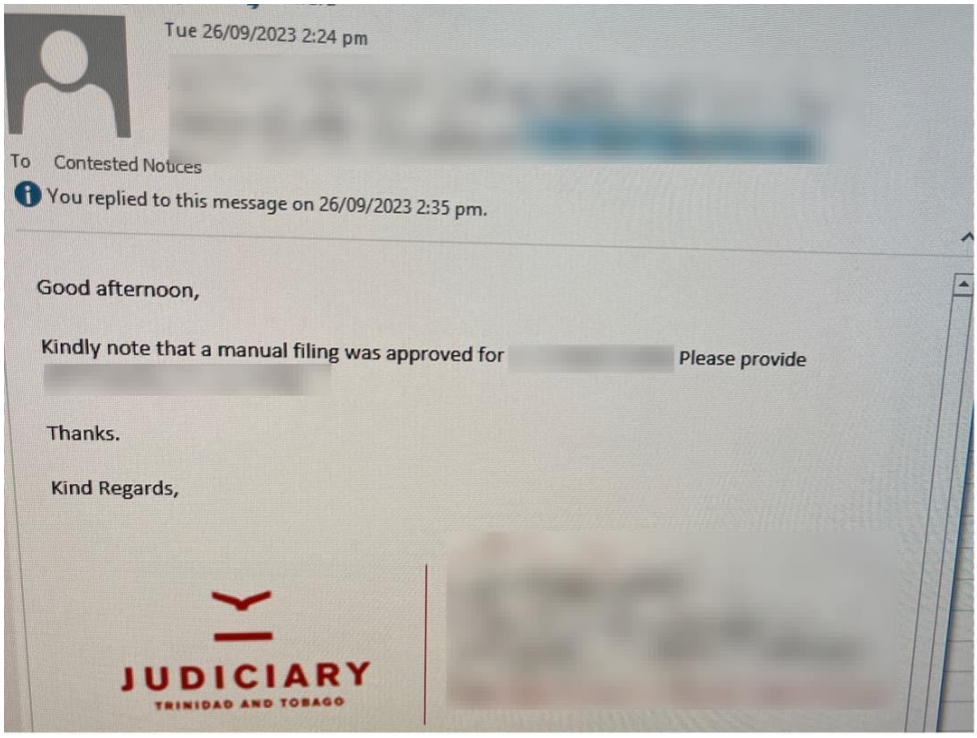


Figure 15. *Picture of Email Verifying Manual Filing*

The MVRT Act also established procedures for motorists to contest or settle fixed penalty notices. Section 85 (see Appendix F) specifies that individuals wishing to contest a notice must

file within fifteen days of issuance, while still permitting payment at any time during the designated period, which automatically removes the matter from the court's docket.

Figure 16 demonstrates how the UTurn operationalizes this statutory requirement through its Contest Portal. Motorists can enter their notice reference, permit number, vehicle registration, and notice date to file a contest electronically. This feature reflects the system's alignment with legal requirements, ensuring that motorists are provided with accessible avenues to exercise their right to contest.

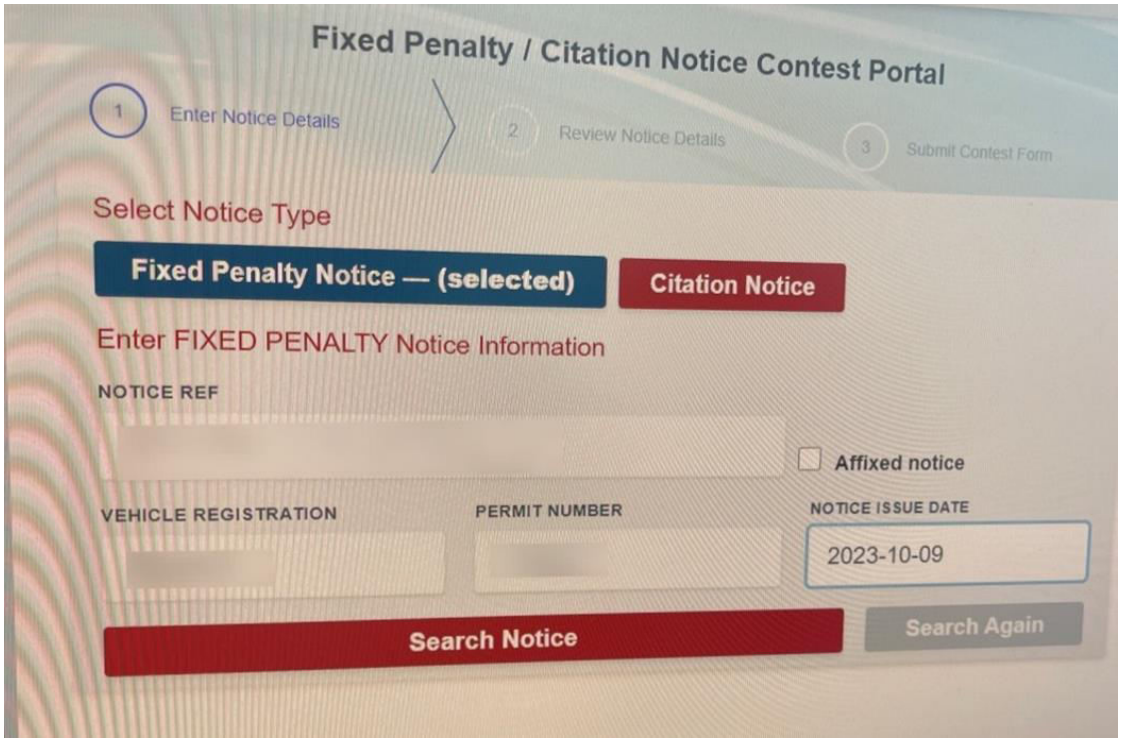


Figure 16. *Screenshot of Contest Screen*

Across these accounts, the law is present in almost every interaction, "reflected in almost every correspondence with the public" (Field Notes Observation 3). Compliance and legal oversight therefore operate not as a separate layer of control but as the very medium through which the UTurn system functions. Automation may have introduced speed and standardization,

but its legitimacy depends on the constant presence of human actors who interpret, verify, and uphold the law that enables the system to exist.

5.2.2 Automation Of Routine Tasks and Reconfiguration of Existing Practices

The implementation of the UTurn software introduced automation into various operational processes of the Licensing Authority, allowing some administrative tasks to be performed without human intervention in some instances, and entangling the technology with humans in others. The existence of the TECU is an example of how routine tasks and automation significantly reduced the reliance on manual processing, thereby increasing both personal and organizational efficiency. This shift not only accelerated workflows but also minimized the risk of human error, ensuring that data entry, record-keeping, and enforcement actions were executed with a higher degree of accuracy and consistency. As a result, employees were able to focus on more complex and strategic responsibilities, enhancing overall productivity while maintaining compliance with regulatory requirements.

Beyond improving efficiency, automation played a critical role in optimizing resource allocation within TECU and the Licensing Authority. In is important to link the automation with digitization; twin and complementary advances that enabled the automation and reconfiguration of existing practices. By reducing some of the administrative burden on staff, the integration of the UTurn allowed for a more strategic approach to workforce management, ensuring that human resources were deployed where their expertise was most needed while also creating new pathways of knowing and in the organization. As the organization continued to engage with the technology, more reconfiguration of practices emerged.

5.2.2.1 Digitalization of Public Interactions and Data Workflow

The UTurn system has transformed how information flows within and beyond the Transport Division, embedding new forms of digital interaction between officers, citizens, and data. What was once expected to be a largely manual, computer-assisted process became, in practice, a fully automated environment. One participant noted, “We thought it would be a lot more manual; more like computer-aided, instead of the software being developed to say, ‘Okay, this is specially what we needed it to do’” (TECU Interview #1).

This transition to digital workflow centralized how information was generated, stored, and shared. In describing data management, one employee explained, “I think it is all stored here, because I do not think they have, based on how it is set up, I don’t think they have anything else, where they would have it stored” (TECU Interview #2).

Officers now log into personal profiles from their field devices, each interaction automatically recorded and linked to the issuing officer: “Each person has a profile… when they issue a ticket, [it] is logged on their profile” (TECU Interview #2). Even historical records are traceable through this digital infrastructure, though retrieval may take time, “They can [access it]; it will just take a while” (TECU Interview #2).

Despite the uniformity promised by centralization, data visibility remains layered. “They have different restrictions amongst them. What this one might not be able to see is not the same thing that this person might be able to see” (TECU Interview 2). This variability reflects the structured permissions that govern access to sensitive information across agencies (Figure 17 picture of TECU portal).

The digitalization of public interactions and data workflows reconfigured how authority operates within the Transport Division. Rather than residing primarily in individual discretion,

authority is increasingly exercised through system-defined permissions, automated records, and controlled data visibility. Decisions about enforcement, access, and verification are shaped by policy and reinforced by the system, which determines what can be seen, recorded, or acted upon. Authority becomes embedded in the workflow itself, with compliance and oversight enacted through digitally enforced guidelines that structure action and constrain discretion without requiring constant managerial intervention.

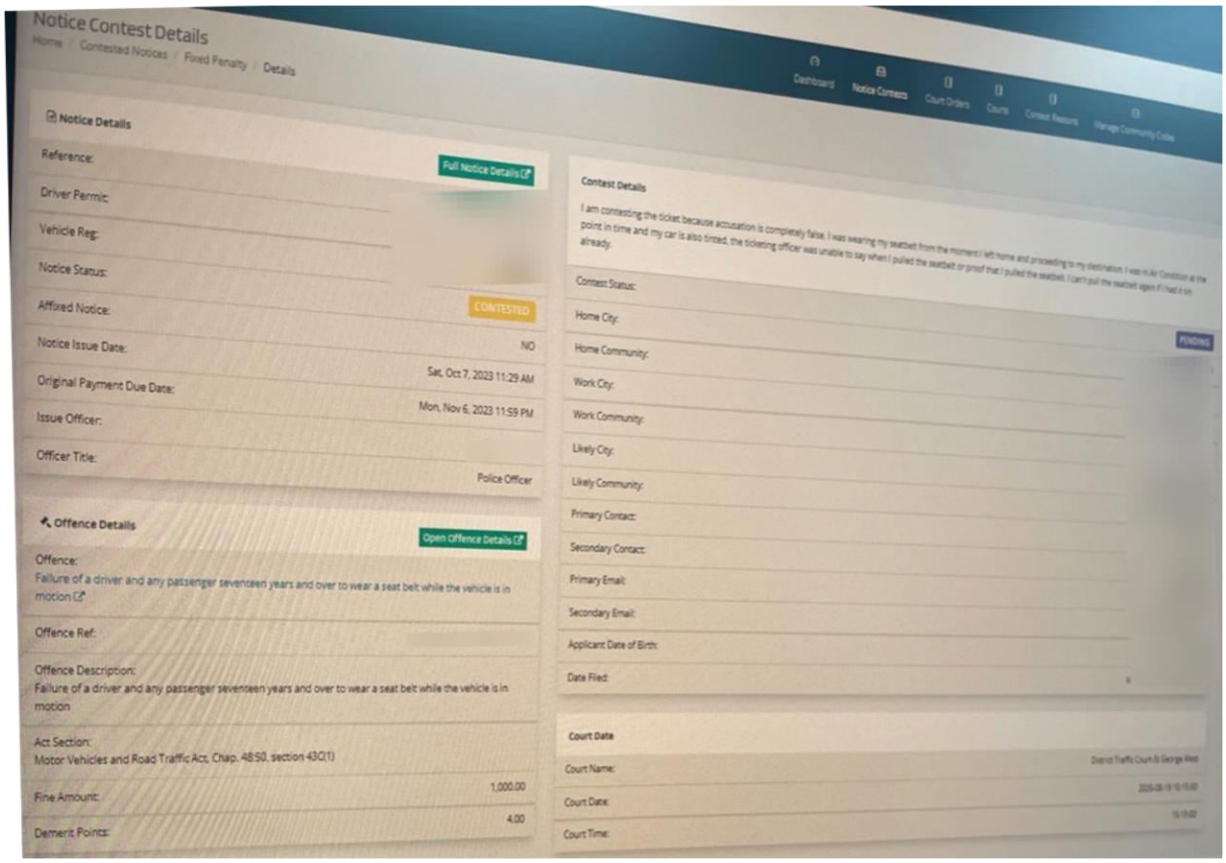


Figure 17. *TECU Staff Portal*

On the operational side, field officers interact with UTurn through mobile devices that integrate GPS and data-capture capabilities. “The technology is easy,” one staff member explained, likening the interface to that of a smartphone, though noting that “troubleshooting is a main one out in the field… you need to know how to troubleshoot, in terms of actually issuing

the particular notice" (TECU Interview 3). Training has therefore become a central component of system use, ensuring that officers can navigate both the technological and procedural aspects of enforcement.

From the citizen's perspective, public interaction with the organization has likewise moved online (see Figure 18). "For individuals, in order to contest a ticket, you have to do it online. There is no other way" (TECU Interview #3). This digital exclusivity signifies a broader institutional shift toward automated communication channels. Citizens no longer hand-deliver documents or engage primarily through physical offices; their encounters are now mediated through motorist user portals.

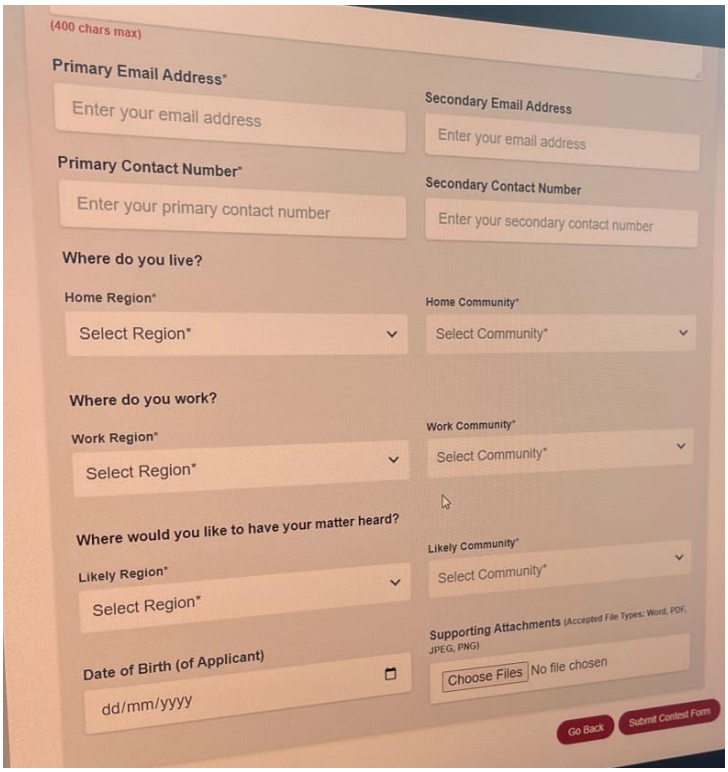


Figure 18. *Motorist Portal for Contesting Tickets*

Central to the implementation and continued use of the UTurn is the idea that digitalization enables real-time oversight and accountability. Staff emphasized that "there's an

audit trail created at every step to see who is responsible for what" (Field Notes Observation 2). The audit trail has become key to how accountability is enacted.

As another note observed, "Audit trails help users find files and track user interactions with the UTurn" (Field Notes Observation 3).

Each ticket, contestation, and response generates a traceable digital footprint, linking field enforcement to centralized data management with TECU and citizen portals. While this integration streamlines communication and strengthens transparency, it also introduces new challenges that are directly linked to the way the system must adhere to the law.

These examples show how the UTurn redefined the relationship between the public and the state by embedding digital-first practices into everyday interactions. Citizens became data producers as much as service recipients, and agencies rely on these inputs to guide decision-making.

The digitalization of public interactions and data workflows reshaped how the Transport Division engages with both officers and the public by embedding governance within technological systems. Information now moves through centralized, automated pathways that link field enforcement, institutional oversight, and citizen participation through shared data infrastructures. While these arrangements enhance traceability and accountability, they also formalize interaction and reduce opportunities for discretionary engagement. As a result, public service delivery is increasingly mediated through digital processes that redefine how authority is exercised, how responsibility is assigned, and how legitimacy is produced in everyday administrative practice.

These findings show that the automation of key organizational practices at TECU was not limited to efficiency gains or technological substitution. Automation reshaped how routine work

is structured, sequenced, and evaluated, embedding legal compliance and accountability directly into everyday practices. While automated systems execute standardized operations with speed and consistency, human actors remain central in interpreting outputs, managing exceptions, and ensuring alignment with organizational and judicial requirements. These results demonstrate that automation functions as an organizing logic for work, redefining professional practice by integrating technological execution with human judgment rather than displacing it.

5.2.2.1 Automation of Key Organizational Practices

The automation facilitated by the UTurn system redefined several of TECU's routine practices. Staff described an early assumption that tasks such as applying demerit points would require human input, only to discover that the software could execute these actions independently, "It still requires the human involvement, but we thought, well, okay, someone would physically have to go in and apply demerit points, and that is something that the software can and does do" (TECU Interview #1).

Automation was introduced with expectations about tracking, accountability, and timeliness. As one participant recalled, "We would say, basically, we want a system that is able to track when a ticket is issued; when it is paid; which kiosk it is paid at the Payment Centre, to apply the demerit points and then run a tab essentially so that for every set of demerit points this person has" (TECU Interview #1).

These functions were extended beyond the automation of key processes to include time-sensitive processes connected to the courts, "Over time, we were able to develop systems also that would help us track and log to know what is being done and to make sure everything is being done on time, especially with the court where everything is time sensitive, because you have to make sure the documents are there before the court date" (TECU Interview #2).

Despite these improvements, extracting data from system generated documents to perform core job goals remains a source of concern, as staff navigates between automation and manual work. One employee described the challenge of having to "do it one by one and copy and paste," noting that such repetition "leaves room for human error," whereas an automated extract "would close the gap."

> "I am not sure how it could be done, but a faster way to extract the data that you need, because where I have to do it now, you do it one by one and copy and paste. I guess that leaves room for human error. Whereas if you have something to automatically extract the data that you need to fill in the document, again a gap will close…so, if you have that, probably to help with the extraction of the data..." (TECU Interview #2).

The same participant emphasized that improved extraction tools would "be faster" and that "productivity will be higher, because I can get a lot more done in a day and…spend time now on other tasks that I have to do" (TECU Interview #2).

The effects of automation extend to recordkeeping and communication with external actors. As another staff member explained, "People from international countries who need to get their license…write to us to find out if they have any outstanding payments and sanctions. So, the system really helps in terms of recordkeeping, rather than being manual" (TECU Interview #3).

In the field, automation has standardized responses and ensured that no decision is imposed before the legally defined threshold. Field observations note that "the system gives a notice at ten demerit points" and "does not allow imposition of disqualification before the stipulated time" (Observations 1 and 3). These technical constraints reinforce procedural fairness by aligning the timing of sanctions with statutory requirements.

Within TECU, the automation of key organizational practices redistributed how routine practices are exercised in everyday work. Tasks such as applying demerit points, enforcing statutory thresholds, and sequencing time-sensitive actions were no longer dependent on individual oversight but embedded within the system that executes predefined rules consistently. In this context, authority is enacted through automated procedures that standardize when and how actions occur, reducing variability while ensuring compliance with legal requirements. Rather than eliminating human involvement, automation reorganizes practice by shifting staff roles toward verification and ensuring adherence to legal mandates, while the system itself performs the repetitive and rule-bound aspects of organizational work. Automation thus becomes a practical mechanism through which organizational authority is stabilized and made operational in routine enforcement activities.

These accounts explain how automation and human labor are entwined: the system executes standardized operations, while employees verify, interpret, and legally operationalize its outputs and taken together, depict a workplace gradually restructured around digital logic. Automation has relieved staff of many repetitive tasks, introduced precision into recordkeeping, and embedded compliance with legislative time frames, however employees still mediate the system's data flows, handle exceptions, and ensure that technological actions remain consistent with legal and organizational norms. Automation, rather than replacing human practice, has become the condition through which those practices are now organized and made accountable.

5.2.2.2 Tensions With the Existing Practices

The introduction of the UTurn system into the everyday operations of the Transport Division has redefined how both citizens and employees experience the process of enforcement, compliance, and contestation. While the system was designed to modernize public service and

increase efficiency, it also created friction between long-standing practices and the expectations of a digital infrastructure. For many citizens, engagement with the system occurs only after an infringement, and their ability to navigate its requirements varies widely. One staff member described how even simple digital prerequisites become barriers:

> "They would use the avenue as being digital and they can't go on the computer; they don't have access. On some days, even in 2024, people don't have internet access… one of the main things that you need to contest a ticket is an email address. Some people don't even have that… or they had to use somebody else's, a neighbor's or a friend's email" (TECU Interview #3).

This scenario underscores how the movement toward digital governance presupposes technological literacy and stable access to connectivity; conditions not universally met among citizens of Trinidad and Tobago. The very tools meant to expand access and transparency, contributed to inequities of access.

Field observations suggest that these limitations intersect with broader cultural dispositions toward authority and the law. Several anecdotes highlight the creative and sometimes defiant ways in which citizens respond to automated enforcement. In one instance, a member of the public told a courier he was dead to avoid accepting a letter from the TECU, only to later admit his identity when stopped in a road exercise (Field Notes Observation 1). In another, a driver disqualified under a local permit resumed driving with a foreign one and was again fined (Field Notes Observation 1).

These acts by motorists meant to circumvent the law are what staff perceive as a general indifference and ambivalence toward sanction: "People are accumulating tickets [and] seem ambivalent to their pending disqualification" (Field Notes Observation 1). Even when the system

provides clear and traceable evidence, some motorists continue to view infractions as negotiable rather than definitive, reflecting deeper cultural patterns of accommodation and avoidance within regulatory environments.

These encounters illustrate that the introduction of automation did not simply impose a new order but reconstituted existing understandings of authority and legality. For many motorists, sanctions generated by the UTurn were not experienced as final or impersonal determinations but as outcomes open to reinterpretation, delay, or circumvention. This ambivalence toward automated sanction reflects longstanding practices in which enforcement was understood as negotiable and mediated through interpersonal engagement rather than system finality. As a result, the authority embedded in digital enforcement is frequently contested, not on technical grounds, but through appeals to fairness, hardship, or procedural inconsistency. The system's legitimacy, therefore, is not self-evident; it must be continually reinforced through human explanation, clarification, and intervention, particularly where digital outcomes clash with entrenched expectations of how authority should be exercised.

Communication gaps between different layers of the system amplify these tensions. During one observation, a man attempting to verify his disqualification status discovered inconsistencies between what citizens, field officers, and back-end staff could see: "We discovered that what the customer sees may not be the same kind of information that the officer who is on the road sees and is certainly different to what the backend users see" (Field Notes Observation 3). These asymmetries create confusion for citizens and additional work for staff, who find themselves taking on additional roles of monitoring and verification to ensure that the information is accurate. In response, employees often rely on direct reminders to reinforce accountability, "Did you check the back of the ticket?" (Field Notes Observation 3). The system

was designed to give more autonomy to the motorists; however, the lack of human intervention can seem counterintuitive to the process.

When asked to put the general tensions into recurring themes, one TECU staff member identified four: “victimization by the authorities, inability to pay, innocence about the allegation, and user error by the issuing officer” (Field Notes Observation 4). These explanations reveal that many citizens engage not with the technical accuracy of the system, but with questions of fairness, power, and legitimacy. Administrative inconsistencies compound this perception, one documented case involved a motorist who received two tickets simultaneously but listed different addresses for each, resulting in court dates three years apart (Field Notes Observation 4). Such irregularities show that both staff and citizens, even with an automated process, remain tethered to human inputs, organizational constraints and legal delays.

These accounts highlight a public caught between the efficiencies of digital governance, the desire to hold on to traditional forms of communication and practices that have seen motorists try to circumvent the law. The UTurn system has streamlined documentation and accountability, however it has reconfigured the point of contact between the state and the citizen into a digital space which has created tensions with motorists and the organization.

Taken together, these findings show that tensions with existing practices are not incidental side effects of digitalization but features of the transition to automated governance. The UTurn system formalizes enforcement and accountability through digital processes, yet these mechanisms operate within social and cultural contexts shaped by uneven access to technology, negotiated compliance, and expectations of human mediation. Citizens and staff alike navigate the resulting frictions, with motorists challenging or circumventing automated outcomes and employees compensating for informational gaps and legitimacy deficits through

additional interpretive work. This demonstrates that digital enforcement does not replace established practices outright; instead, it unsettles them, producing ongoing negotiation between system logic and lived experience that reshapes how authority, compliance, and fairness are understood in everyday practice.

5.2.3 Focus on Monitoring and Verification

Although the UTurn automated many core functions, the system did not remove the need for human oversight, Instead, it reconfigured practices of monitoring and verification. This section examines how staff used UTurn's monitoring functions to maintain accuracy, ensure compliance with the law, and preserve institutional legitimacy.

One of the strongest themes across the interviews was that officers were required to carefully monitor system outputs to ensure compliance with the law. As highlighted in the field notes:

> Discussion revolved around the wide functionality of the system and the contribution of human error to some of the issues being faced. Additionally, as identified by the head of the department in his interview, the system is constrained in large part by what the law of the land says, ergo, while some thing can be system generated, there is need for the creation of physical files to ensure that public service requirements are met. So, a large part of the job is also creating files and sending out notification via the postal company because the law mandates that there must be notification before action can be taken and this must be done in writing (email can work for those who respond to emails) (Field Notes Summary from TECU Observation 1).

This shows that monitoring and verification were not secondary tasks but central to the UTurn's effectiveness. Staff was tasked with ensuring that automated processes aligned with

both organizational procedures and legal frameworks. In this way, monitoring and verification became the mechanism through which efficiency gains were balanced with accountability, allowing the Transport Division to maintain public trust while still adhering to organizational goals.

5.2.3.1 Shift in Job Function and Role

The introduction of the UTurn system altered how work is organized and experienced within the Transport Enforcement Centre Unit, leading to shifts in both the meaning and execution of staff roles. While official job descriptions remain formally defined, the everyday practices that sustain the organization have become increasingly fluid. As one staff member reflected, “because of how we kind of met the software here and had to learn it... it was just a matter of shifting your perspective as to what you thought your job would be” (TECU Interview #1). This adjustment captures the learning process through which employees recalibrated their sense of responsibility to align with the demands of an evolving digital workspace.

The shift is not limited to new technical skills but extends to a broader redefinition of the fluid role employees have in the TECU. One participant observed,

> “I was of the view that if the staff are to function as analysts, they should have a full idea of how the system works from start to finish and not just in one task or in one role. I mean, ‘jack of all trades, master of none,’ but sometimes when you are a master at something, you really don’t see the larger picture” (TECU Interview 1).

In this employee’s reflection, the work of enforcement and administration is reframed as analytical practice, one that requires understanding how the entire system functions as a whole rather than focusing on isolated tasks. The comment also highlighted a broader organizational

transformation: the move from clerical or procedural duties toward interpretive and integrative forms of work.

These shifts also reshaped the relationship between people and procedures, with automation structuring many of the technical functions, human intervention now focuses on maintaining continuity, troubleshooting, and contextual judgment. Staff emphasized the need for flexibility in responding to system or communication failures:

> "Persons could change desks, from who is there currently; they have a different style; or the email gets lost, deleted, ends up in an archive somewhere, and they can't find it. So, then we have to basically either do it over, or we have to find the old record to send back the original document" (TECU Interview 2).

Routine disruptions like misplaced emails or changing personnel reveal how individual practices and institutional systems remain interdependent. Automation reduces redundancy, but the reliability of workflow still depends on human recall, initiative, and adaptation.

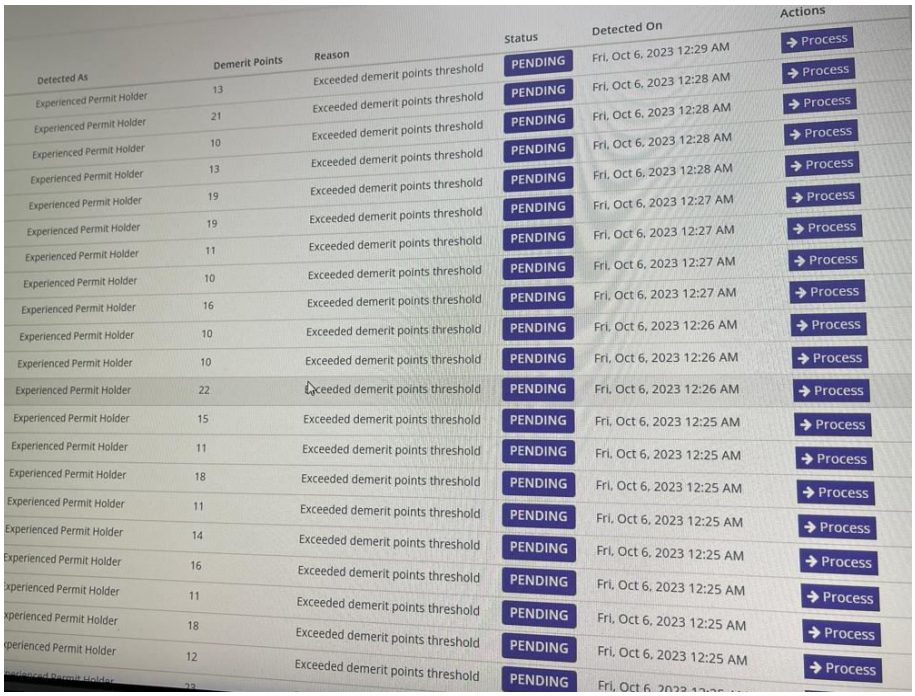
At the same time, employees develop a personal investment in their work processes, incorporating elements of their own method and rhythm into the organization's structure. One participant noted that although the portfolio's tasks are standardized, its execution reflects their individual approach: "I have been on this particular schedule since inception, it has become mine. Everything is a bit integrated into my style and how I would go about completing the task, whereas if somebody else comes in now, they might have a different idea and approach" (TECU Interview #2). This sense of ownership exemplifies how this digitized system still leaves room for individuality; workers not only operate the system but also shape how it functions through accumulated experience and expertise.

Field observations reinforced this dynamic, one staff member's role involves daily monitoring of tickets issued the previous day, identifying inconsistencies, and forwarding actionable information to other members of the team (Field Notes Observation 2). Such practices exemplify the hybrid nature of contemporary bureaucratic work: employees are both data stewards and interpreters, responsible for transforming system-generated information into meaningful organizational action.

Together, these accounts portray a workplace in transition, where automation has neither displaced human judgment nor fixed roles into rigid templates. Instead, the UTurn system has created new spaces of discretion, analysis, and coordination, spaces where employees continuously redefine what their job entails in relation to technology, law, and organizational practice.

5.2.3.2 Balancing Automation with Human Intervention

The implementation of the UTurn system has not replaced human judgment but has instead redefined it. Within TECU, automation and human oversight coexist in a continuous process of verification, correction, and adaptation, staff are responsible for ensuring that system-generated actions align with both legal requirements and organizational expectations (see Figure 19). The formal structure mandates that employees "oversee, control, and guide the functioning of the UTurn," including monitoring system users, troubleshooting errors, and making operational decisions based on automated outputs (Field Notes Summary, TECU Observation 2). In this configuration, professional authority is exercised less through discretionary decision-making and more through stewardship, as staff assume responsibility for supervising, interpreting, and legitimizing automated actions.



Detected As	Demerit Points	Reason	Status	Detected On	Actions
Experienced Permit Holder	13	Exceeded demerit points threshold	PENDING	Fri, Oct 6, 2023 12:29 AM	Process
Experienced Permit Holder	21	Exceeded demerit points threshold	PENDING	Fri, Oct 6, 2023 12:28 AM	Process
Experienced Permit Holder	10	Exceeded demerit points threshold	PENDING	Fri, Oct 6, 2023 12:28 AM	Process
Experienced Permit Holder	13	Exceeded demerit points threshold	PENDING	Fri, Oct 6, 2023 12:28 AM	Process
Experienced Permit Holder	19	Exceeded demerit points threshold	PENDING	Fri, Oct 6, 2023 12:28 AM	Process
Experienced Permit Holder	19	Exceeded demerit points threshold	PENDING	Fri, Oct 6, 2023 12:27 AM	Process
Experienced Permit Holder	11	Exceeded demerit points threshold	PENDING	Fri, Oct 6, 2023 12:27 AM	Process
Experienced Permit Holder	10	Exceeded demerit points threshold	PENDING	Fri, Oct 6, 2023 12:27 AM	Process
Experienced Permit Holder	16	Exceeded demerit points threshold	PENDING	Fri, Oct 6, 2023 12:27 AM	Process
Experienced Permit Holder	10	Exceeded demerit points threshold	PENDING	Fri, Oct 6, 2023 12:26 AM	Process
Experienced Permit Holder	10	Exceeded demerit points threshold	PENDING	Fri, Oct 6, 2023 12:26 AM	Process
Experienced Permit Holder	22	Exceeded demerit points threshold	PENDING	Fri, Oct 6, 2023 12:26 AM	Process
Experienced Permit Holder	15	Exceeded demerit points threshold	PENDING	Fri, Oct 6, 2023 12:25 AM	Process
Experienced Permit Holder	11	Exceeded demerit points threshold	PENDING	Fri, Oct 6, 2023 12:25 AM	Process
Experienced Permit Holder	18	Exceeded demerit points threshold	PENDING	Fri, Oct 6, 2023 12:25 AM	Process
Experienced Permit Holder	11	Exceeded demerit points threshold	PENDING	Fri, Oct 6, 2023 12:25 AM	Process
Experienced Permit Holder	14	Exceeded demerit points threshold	PENDING	Fri, Oct 6, 2023 12:25 AM	Process
Experienced Permit Holder	16	Exceeded demerit points threshold	PENDING	Fri, Oct 6, 2023 12:25 AM	Process
Experienced Permit Holder	11	Exceeded demerit points threshold	PENDING	Fri, Oct 6, 2023 12:25 AM	Process
Experienced Permit Holder	18	Exceeded demerit points threshold	PENDING	Fri, Oct 6, 2023 12:25 AM	Process
Experienced Permit Holder	12	Exceeded demerit points threshold	PENDING	Fri, Oct 6, 2023 12:25 AM	Process

Figure 19. *Pending Disqualification Cases Requiring Staff Processing*

While much of the enforcement process now runs automatically, human monitoring remains critical. As one employee explained, “It is just a matter of us monitoring and ensuring that things fall off when they are supposed to fall off; things are added when they are supposed to be added, not necessarily me having to go to look for [name redacted] record and add four points because she had a seat belt ticket” (TECU Interview #1). The comment captures a key organizational balance, automation performs repetitive and rule-based tasks, while human intervention ensures procedural accuracy and legal conformity.

This interplay between the digital and the human is rooted in the evolution of the software itself. “I think that is one of the things that we envisioned that we said, ‘Okay, cool, we could get the software to do all of this and more,’ and then it is less computer-aided, and we focus more on how the technology could work for us” (TECU Interview #1). The staff members emphasis on “how the technology could work for us” reflect a shift in orientation, from being passive users of a system to becoming active designers of its functionality. This perspective

highlights a pragmatic relationship with automation; staff seek to harness the UTurn's efficiency without surrendering the discretion required by public service.

Field observations show that this balance is sustained through ongoing communication and judgment rather than rigid protocols. Staff frequently consulted each another when interpreting system-generated outcomes, particularly in cases where legal nuances or system errors emerged. This collaborative oversight ensures that decisions retain legitimacy even when mediated by the UTurn. The daily routine of monitoring, cross-checking, and reviewing output underscores that automation's effectiveness in the public sector depends on its integration with human oversight.

In practice, TECU operates as a hybrid environment where data-driven automation and bureaucratic expertise reinforce each other. The system automates functions like tracking, record generation, and notifications, yet its success rests on the staff's capacity to interpret, contextualize, and correct its actions. Rather than diminishing the human role, automation has reinforced the need for skilled mediation, with employees functioning as stewards of both the technological process and the legal framework.

5.2.3.3 Continuous Adaptation and Evolving System Use

The evolving use of the UTurn system by the TECU has required staff to adapt their practices and expectations in response to how the technology performs in real-world conditions. Although the system was designed with very specific criteria, its actual implementation revealed new needs and limitations, prompting organizational learning. As one participant noted, "So, we may have intended for the software to do a particular something, and now that it has been operationalized, we think: Hey, we need it to do something else, or to not be able to do what we thought we needed it to do at the point in time" (TECU Interview #1). This recognition marks the

shift from a design-oriented view of automation to a practice-oriented one, where the system's value is determined by how effectively it can be adapted to unanticipated challenges. In this context, authority is exercised through adaptive practice, as staff claim legitimacy not by adhering rigidly to system design but by modifying how the system is used to sustain organizational effectiveness.

Adaptation has also taken concrete form in the development of new service practices that complement automated functions. For example, persistent failures in postal delivery exposed a gap in the system's ability to ensure citizens received their notifications. "The in-person service would have definitely come about on account of us realizing: Hey, we have failure to deliver by TTPost, and we have persons who are just accumulating demerit points. How do we meet these people where they are at, without actually knowing where they are at?" (TECU Interview #1). What emerged was a pragmatic hybrid solution, Transport Officers meeting motorists in the field or serving them directly at the Division, transforming what had been intended to be a purely digital process into a more embodied and relational one.

These adaptive efforts were driven largely by staff initiative; one staff member recalled the moment they identified the pattern of failed deliveries and proposed an alternative:

> "The very first time we did the manual service as a practice, back then I used to only do 'no calls' files… I recognized that, in relation to all these people who are getting these letters and not responding, we have a lot of failed deliveries. So 'vaps'! I decided to collate a list and say — at that point in time, it was Mr. (Redacted) — I said, '(Redacted), I have these people from this manifest here, the letters are not delivering; they are getting more points, what do we do?'" (TECU Interview #1)

This spontaneous act of problem-solving, collecting data manually to identify systemic blind spots, reflects how adaptation is often initiated from below, through observation and improvisation rather than formal policy.

Over time, these informal adjustments became institutionalized, as the same staff member described,

> "It became departmental policy where anyone who right now has the skill to generate letters… once someone has come in here and facing issues where they have a transaction restriction blocking them from doing business… once we could confirm that correspondence wasn't delivered or was failed, or whatever the case may be, then that policy comes into place and you will be served" (TECU Interview #1).

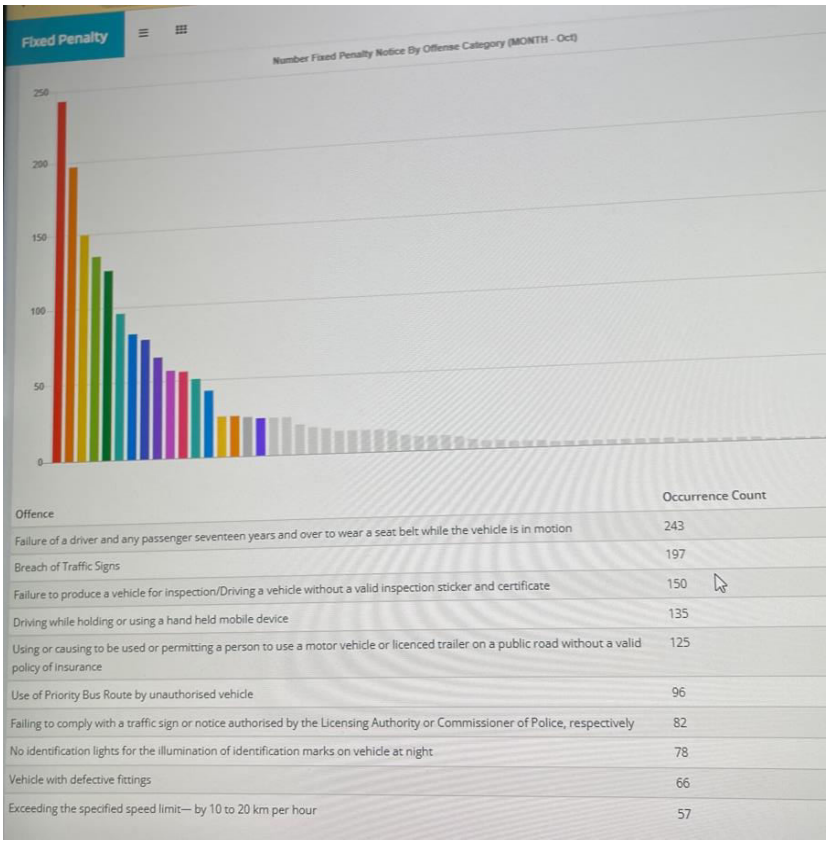
What began as an improvised response to inefficiency evolved into a standing operational rule, demonstrating the organization's capacity to translate insight from experience into departmental policy. These accounts explain how TECU's engagement with automation is not static but continuously negotiated. The UTurn system is shaped not only by software updates or top-down directives but by the everyday decisions of employees who identify gaps, propose alternatives, and refine procedures. Adaptation, in this sense, is both a technical and organizational accomplishment, anchored in the capacity of human actors to reinterpret, modify, and extend the logic of the system as they work with it.

5.2.4 Data Driven Decision-making

The integration of the UTurn system transformed how decisions we made within the Transport Division with TECU as a primary example of that shift, moving the organization toward a culture of evidence-based reasoning. Staff consistently described the difference between how decisions were made before and after the implementation of the system. One

participant explained, “We could now make recommendations based on evidence, not necessarily anecdotal. Before, we were going based on what we thought or what we heard, but now we could actually run a report, check trends, and make a case for what needs to be done” (TECU Interview #1). The UTurn platform, by automating record-keeping and consolidating enforcement data, provides staff with a concrete foundation for analysis that previously did not exist before its introduction (see Figure 20 for UTurn generated data).

This capacity to interpret data in context allows TECU to identify trends and connect them to operational issues. “For instance,” one employee observed, “if we notice that the number of people being disqualified in a particular area keeps increasing, we can look at what might be happening there, whether it’s an enforcement issue or a communication one. The data helps us to see those patterns” (TECU Interview #1). The statement reflects a growing analytical orientation among staff, one in which decisions are informed by patterns emerging from system reports rather than intuition or hierarchy.



Offence	Occurrence Count
Failure of a driver and any passenger seventeen years and over to wear a seat belt while the vehicle is in motion	243
Breach of Traffic Signs	197
Failure to produce a vehicle for inspection/Driving a vehicle without a valid inspection sticker and certificate	150
Driving while holding or using a hand held mobile device	135
Using or causing to be used or permitting a person to use a motor vehicle or licenced trailer on a public road without a valid policy of insurance	125
Use of Priority Bus Route by unauthorised vehicle	96
Failing to comply with a traffic sign or notice authorised by the Licensing Authority or Commissioner of Police, respectively	82
No identification lights for the illumination of identification marks on vehicle at night	78
Vehicle with defective fittings	66
Exceeding the specified speed limit— by 10 to 20 km per hour	57

Figure 20. *UTurn-Generated Report on Traffic Offences, October 2023*

The use of these reports extends beyond the internal management of the Transport Division. Field notes show that “reports are generated showing the number of tickets issued, paid, or contested,” and that “these reports are used by management to identify trends and plan enforcement exercises” (TECU Observation 2). Another note indicates that data “is sometimes shared with the Ministry of Works and Transport and used to support recommendations for changes in road signage and speed enforcement zones” (TECU Observation 3). Through such sharing, the system’s analytical outputs influence decisions at the policy level, linking TECU’s operations to broader strategies of road safety and policy creation.

Staff also recognized the strategic value of data in shaping administrative and managerial interventions. “It makes it a lot easier for the management to justify why certain changes or

interventions need to happen, because they have the numbers right there" (TECU Interview # 2). With data visualization tools and automated dashboards, managers can defend or adjust enforcement policies with empirical support. In one example, "a report showing a high concentration of repeat offenders in a particular region led to a targeted enforcement exercise conducted jointly with TTPS" (TECU Observation 3). This shows how system outputs translate directly into coordinated public action.

Real-time data also enhances accountability, "If, for example, the number of persons contesting tickets in a month spikes, we can easily trace which officer or which offence type is causing that, and we can intervene" (TECU Interview #3). This new visibility allows supervisors to detect irregularities, monitor field behaviour, and intervene before inefficiencies escalate. The accompanying visual tools provide concrete representations of organizational performance and public compliance.

Collectively, these practices mark a significant cultural shift in public-sector decision-making, the UTurn system embeds data as both an operational and a legitimizing resource: it shapes how problems are identified, how policies are defended, and how outcomes are measured. Decision-making has become iterative and empirical, an ongoing process of interpretation where the authority of the organization increasingly rests on its ability to produce, read, and act upon data.

5.2.4.1 Real-Time Information Sharing

The UTurn system created a new flows and pathways of communication across the enforcement network, where information circulates almost instantaneously between TECU, Licensing officers, and the Police Service. Staff no longer wait for physical files or end-of-day summaries; instead, the system's architecture allows for immediate synchronization of actions in

the field and responses at the administrative centre. As one participant described, “We would be advised, ‘Okay, they are out here. They are on site from this time to this time.’ Depending on the time of the exercise… we were also told, ‘Okay, they are going to be on site there’” (TECU Interview #1). These updates, transmitted through the system and confirmed by phone or email, ensure that TECU’s internal schedule aligns with the enforcement exercises happening in real time.

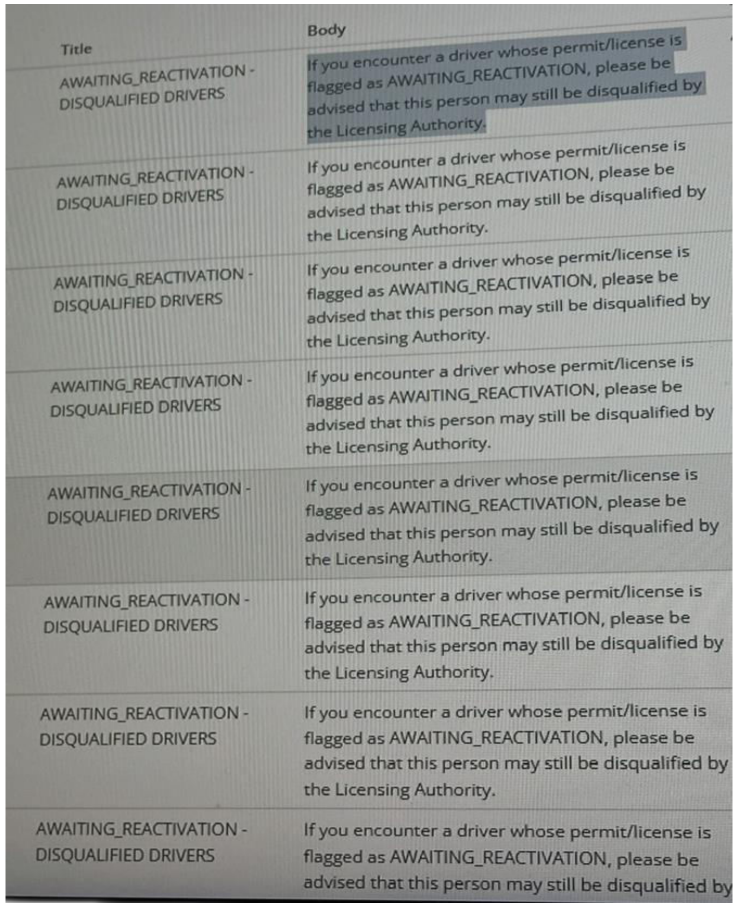
This continuous data flow enables administrative staff to support field officers directly, validating documentation and generating correspondence as events unfold. One employee explained the access of the UTurn field officer said:

> “[name redacted] has access to the UTurn system in a particularly limited kind of way, but what he doesn’t have access to is our documentation as it relates to what letter went out when… the support that they need is for them to capitalize on what type of letter is being served at the point in time” (TECU Interview #1).

The relationship is therefore reciprocal, while the system automates data collection, TECU staff supply confirmation and contextual judgment that maintain procedural accuracy. This interaction is especially visible during enforcement operations. “When he was on the road, if you would have seen him serving some Notices of Intent, that is because we would have confirmed on our end: ‘Hey, this letter wasn’t delivered. You need to serve him this time.’ So, we will generate the letters here, send it to him and he will just print and serve” (TECU Interview #1). Such coordination shows how the boundaries between administrative and fieldwork have blurred; officers rely on instant communication with the back end to complete legally valid service, while TECU relies on them to close the procedural loop in the field. In this arrangement, authority is exercised through real-time coordination, as TECU’s capacity to validate, generate,

and transmit information synchronously enables enforcement actions to proceed with institutional legitimacy across organizational boundaries.

Real-time visibility also extends to data verification, “Sometimes they contact me in terms of individuals they stop who actually don’t have their driver’s permit… They have their channels – the TTPS – but they tend to try and call us first because we have direct links in terms of searching people by the person’s name, date of birth, things like that” (TECU Interview #3). Officers request confirmation from TECU because “individuals lie out there… They say they have a permit and sometimes they never even have a permit.” The same staff member summarized her role by saying: “I assist in terms of things like that, so the calls come for technicalities, as well as misleading information” (TECU Interview #3). These exchanges demonstrate how access to live data reinforces enforcement credibility, enabling TECU to be an information hub that validates, corrects, and supplements what field officers observe (see Figure 21 for live data available to Transport Officers).



Title	Body
AWAITING_REACTIVATION - DISQUALIFIED DRIVERS	If you encounter a driver whose permit/license is flagged as AWAITING_REACTIVATION, please be advised that this person may still be disqualified by the Licensing Authority.
AWAITING_REACTIVATION - DISQUALIFIED DRIVERS	If you encounter a driver whose permit/license is flagged as AWAITING_REACTIVATION, please be advised that this person may still be disqualified by the Licensing Authority.
AWAITING_REACTIVATION - DISQUALIFIED DRIVERS	If you encounter a driver whose permit/license is flagged as AWAITING_REACTIVATION, please be advised that this person may still be disqualified by the Licensing Authority.
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AWAITING_REACTIVATION - DISQUALIFIED DRIVERS	If you encounter a driver whose permit/license is flagged as AWAITING_REACTIVATION, please be advised that this person may still be disqualified by the Licensing Authority.
AWAITING_REACTIVATION - DISQUALIFIED DRIVERS	If you encounter a driver whose permit/license is flagged as AWAITING_REACTIVATION, please be advised that this person may still be disqualified by the Licensing Authority.
AWAITING_REACTIVATION - DISQUALIFIED DRIVERS	If you encounter a driver whose permit/license is flagged as AWAITING_REACTIVATION, please be advised that this person may still be disqualified by the Licensing Authority.
AWAITING_REACTIVATION - DISQUALIFIED DRIVERS	If you encounter a driver whose permit/license is flagged as AWAITING_REACTIVATION, please be advised that this person may still be disqualified by

Figure 21. *UTurn Generated Information Alerting Officers About Potential Errant Drivers (Motorist's Names Omitted)*

Field observations confirm that the UTurn system operates continuously in real time. During the TECU observation, a staff member pulled up a screen that showed the most recent ticket that was give and noted that now on the back end, he can see all the vehicle information when an officer scans it into the system. The staff member added that "vehicles that were reported stolen over 10 years ago have now been found based on officers' ability to compare data in real time" (Field Notes Observation 2). Another note recorded that comments entered into the system when a permit is disqualified, now allows officers "to have more information when they stop a driver and see why a permit may have been disqualified" (Field Notes Observation 1). The immediacy of these updates means that enforcement actions, administrative checks, and judicial processes are all informed by the same live database.

Images captured during observation further demonstrate the pace and transparency of this system, a “ticket issued at 8:30 am shows up immediately on the system,” and “picture taken by the officer as evidence [is] available to TECU and the Court,” and “a ticket that has been paid [is] visible immediately to TECU Staff and Police/Licensing Officers” (Field Notes Observation 4/ Figure 22). Through this automated process, information moves seamlessly from roadside enforcement to courtroom evidence without the lag once caused by paper-based filing.

Figure 22. *Picture Taken by Transport Officer Immediately Available to TECU and Judiciary Staff*

Collectively, these accounts demonstrate how real-time information sharing has restructured both the tempo and spatial organization of administrative work. Actions that once depended on delayed reporting and sequential handoffs now unfold through a shared, continuously updated data environment linking field officers, TECU staff, and judicial staff. This immediacy enhances coordination and evidentiary integrity, allowing enforcement, verification, and adjudication to operate within a single communicative circuit. At the same time, real-time data does not function autonomously; it depends on human interpretation, confirmation, and

judgment to ensure that speed does not come at the expense of accuracy or accountability. Real-time information sharing thus operates as a sociotechnical accomplishment, combining technological immediacy with human oversight to sustain legitimate and synchronized enforcement practice.

5.2.4.2 Enhanced Data Access and Analysis

The UTurn system expanded TECU's analytical capacity by transforming raw enforcement data into accessible, actionable information. What used to be paper files and across multiple sites is now consolidated into a searchable, visual, and continuously updated database. One participant explained, "The system allows us to extract data on anything — number of tickets issued, type of offences, who issued them, where, and when. It makes it easy to see patterns that we would never have noticed before" (TECU Interview #1). The immediacy of digital access enables employees and managers to identify trends, generate reports, and make informed decisions without the delays and inconsistencies of manual recordkeeping.

Staff repeatedly emphasized how automation replaced the inefficiencies of the paper-based system. "Before, you would have to go through physical files to find something or depend on somebody's memory. Now, you just run a report" (TECU Interview #1). Through this process, administrative knowledge has become less dependent on individual expertise and more embedded within the technological infrastructure of the organization. The ability to extract and filter data by time, region, officer, or offence type, has fundamentally altered the way the organization treats and processes information (see Figure 23 for system generated report).

Offence	Court Date
Failure of a driver and any passenger seventeen years and over to wear a seat belt while the vehicle is in motion	Wed, Aug 19, 2026 2:15 PM
Driving while holding or using a hand held mobile device	Thu, Dec 14, 2023 2:30 PM
Vehicle without two head lamps	Thu, Jan 22, 2026 2:15 PM
Driving a vehicle with a person in the front seat who is not wearing a seat belt	Thu, Dec 14, 2023 2:15 PM
Unauthorised lights to front or rear of vehicle	Tue, Oct 17, 2023 2:15 PM
Failure of a driver and any passenger seventeen years and over to wear a seat belt while the vehicle is in motion	Wed, Apr 3, 2024 2:00 PM
Driving a vehicle with a person in the front seat who is not wearing a seat belt	Wed, Apr 3, 2024 1:45 PM
Overtaking traffic at a place dangerous to do so	Wed, Aug 19, 2026 3:00 PM
Failing to comply with a traffic light signal	Wed, Aug 19, 2026 2:45 PM
Parking within nine metres of a corner	Thu, Dec 14, 2023 2:00 PM
Negligently or wilfully interrupting the free passage or causing an unnecessary obstruction	Thu, Dec 14, 2023 1:45 PM
Use of Priority Bus Route by unauthorised vehicle	Wed, Oct 18, 2023 1:00 PM
Breach of Traffic Signs	Wed, Aug 19, 2026 2:30 PM
Using or altering a motor vehicle or trailer for a purpose not authorised by the registration or Licensing Authority	Wed, Aug 19, 2026 2:15 PM
Breach of Traffic Signs	Tue, Oct 17, 2023 3:45 PM
Failure to produce a vehicle for inspection/Driving a vehicle without a valid inspection sticker and certificate	Wed, Aug 19, 2026 2:00 PM
Breach of Traffic Signs	Tue, Oct 17, 2023 2:00 PM
Vehicle without horn	Tue, Oct 17, 2023 2:00 PM
Breach of Traffic Signs	Tue, Oct 17, 2023 1:45 PM
Use of vehicle with defective tyres	Wed, Apr 3, 2024 1:30 PM
Improper overtaking on the right, cutting in	Thu, Jan 22, 2026 2:00 PM
Failure to produce a vehicle for inspection/Driving a vehicle without a valid inspection sticker and certificate	Wed, Apr 3, 2024 1:15 PM
Failing to comply with a traffic sign or notice authorised by the Licensing Authority or Commissioner of Police, respectively	Tue, Oct 17, 2023 1:15 PM
Driving while holding or using a hand held mobile device	Wed, Apr 3, 2024 1:00 PM
Exceeding the specified speed limit— by 10 to 20 km per hour	Tue, Oct 17, 2023 2:45 PM
Failure of a driver and any passenger seventeen years and over to wear a seat belt while the vehicle is in motion	Wed, Aug 19, 2026 1:45 PM
Improper overtaking on the left side of the road	Wed, Aug 19, 2026 1:30 PM
Driving while holding or using a hand held mobile device	Wed, Aug 19, 2026 1:15 PM
	Wed, Aug 19, 2026 1:00 PM
	Tue, Aug 18, 2026 2:45 PM

Figure 23. *Report on Offences and Court Dates for Contestation*

The new visibility provided by the system extends beyond record retrieval; it allows staff to monitor performance, identify anomalies, and anticipate workload pressures. “We can check for trends like repeat offenders, or officers who have a higher rate of contested tickets, or even errors in data entry. It is all visible” (TECU Interview #2). With these insights, TECU can redistribute responsibilities and improve oversight. As another employee observed, “It also gives us a better sense of workload, for example, we can see who is issuing the most tickets and balance assignments accordingly” (TECU Interview #2).

These accounts suggest that data accessibility has not only enhanced transparency but also reconfigured managerial control by providing new metrics for evaluating productivity and accuracy. In this setting, authority is increasingly exercised through analytical visibility, as access

to real-time data enables the organization to evaluate performance, allocate resources, and justify intervention on the basis of system-generated evidence.

At the same time, the analytical functions of the UTurn are not limited to quantitative outputs. “It’s not just numbers,” one participant explained. “The system also stores the pictures, so when there’s a dispute or a question, we can go back and look at the actual evidence that was uploaded” (TECU Interview #3/Figure 24). The inclusion of visual and documentary evidence alongside statistical reports strengthens the credibility of administrative decisions, allowing TECU to cross-reference data points and verify accuracy when discrepancies arise.

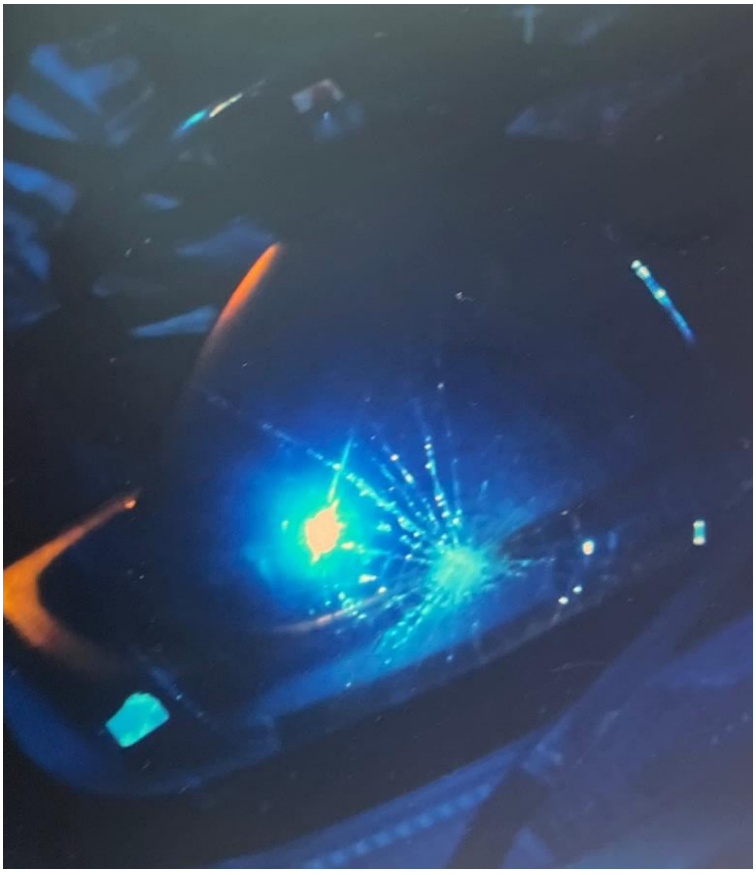


Figure 24. *Picture on the System of a Broken Headlight Taken by a Transport Officer*

Observations highlighted how this enhanced access operates in practice, during one demonstration, “staff generated several reports showing offences by type, by month, and by

officer," which "are used to prepare internal summaries and to brief the Ministry" (Field Notes Observation 2). Another observation described a "dashboard showing driver disqualification trends… allowing filtering by region, date, and gender," which helps in preparing monthly statistical summaries (Field Notes Observation 3). The accompanying visual interfaces, "dashboard summary of tickets issued per district" and "graph showing correlation between offence type and frequency of contestation" (Field Notes Observation 3) make complex data intelligible immediately.

These developments mark a significant transformation in the way information circulates and is acted upon within TECU. Enhanced data access has embedded analytical reasoning into everyday practice, equipping staff to detect irregularities, balance workloads, and justify interventions through evidence. The system has created a new form of organizational knowing, one where decision-making and accountability are grounded not in recollection or routine, but in the capacity to read, interpret, and act upon the continuously generated data of administrative life.

5.2.4.3 Support Communication Processes

The UTurn system has enhanced the communicative capacity of the Transport Division by creating multiple points of interaction among citizens, officers, and administrative staff. Through its digital infrastructure, the system enables messaging, collaboration, and information exchange that link individual cases to the wider enforcement and judicial process. Staff emphasized that the system's communicative functions allow for continuous dialogue between the organization and the public. As one participant described,

> "At the end of the 30-day period, we send out a letter to people telling them, 'Hey, we notice you have this ticket that has not been paid,' and they have an opportunity to write

back. Let's say, for example, I had one person who was actually able to document that he was out of the country… so we were able to work it back; contact the officer; get a report done, and all of this, to say, 'Well, okay, perhaps we will take his word. He wasn't here; it wasn't him,' and have that rectified" (TECU Interview #1).

Figure 25 gives an example of how the TECU staff member is able to track the postage, delivery and receipt of a letter issued by the Transport Division.

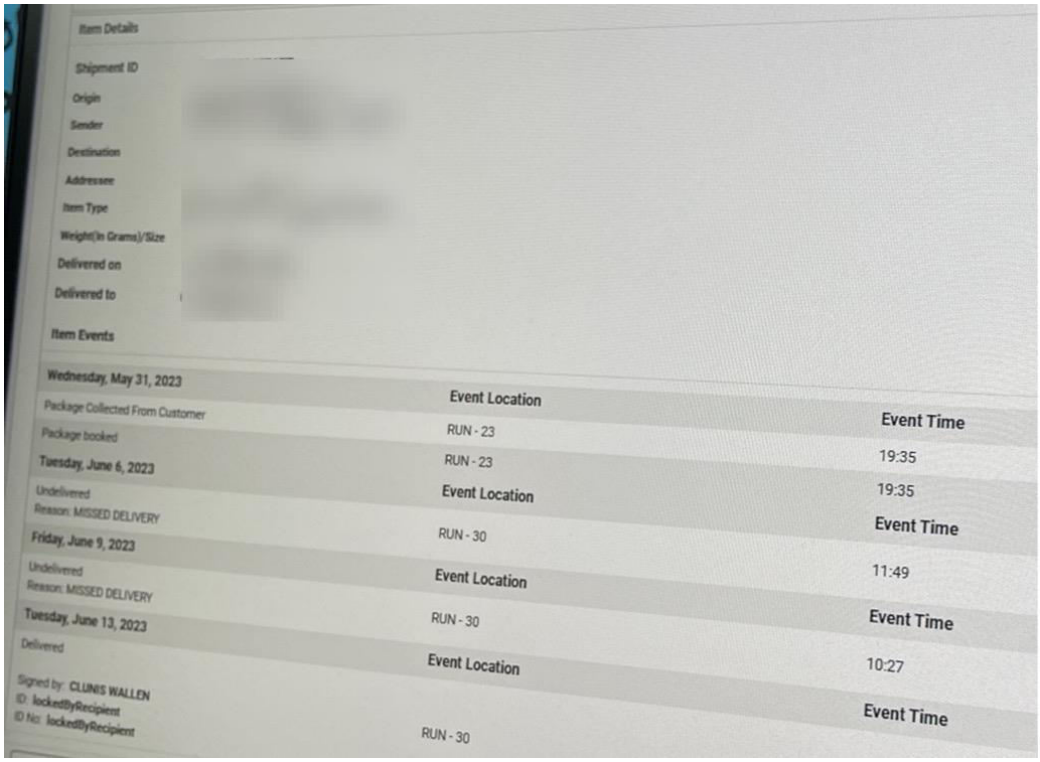


Figure 25. *Picture of System Tracking by TTPost, shows When Letters Were Sent Out and Received by Motorist*

This exchange exemplifies how the UTurn functions not only as a tracking tool but as a communicative bridge, facilitating correspondence, review, and resolution between citizens and the agency. Such interactions also demonstrate a shift from one-way notification to two-way communication, where the system enables responses, documentation, and verification that were previously handled through manual visits or prolonged delays. In this configuration, communication itself becomes an organizational practice through which authority, legitimacy,

and resolution are negotiated, as system-mediated exchanges structure how claims are heard, verified, and acted upon.

However, staff also noted that communication through the digital platform is not equally accessible to all users, as one staff member explained,

> "It will factor with the age. So, you find that younger persons have no problem… Older generations, you get a bit more push back in terms of not understanding it. They want to see somebody, because that is how they are accustomed conducting business. They are more used to talking to somebody than doing something online" (TECU Interview #2).

This observation underscores how digital transformation introduces new divides based on technological familiarity and access. While the system streamlines administrative communication, it simultaneously creates challenges for those less equipped or unwilling to engage through digital means.

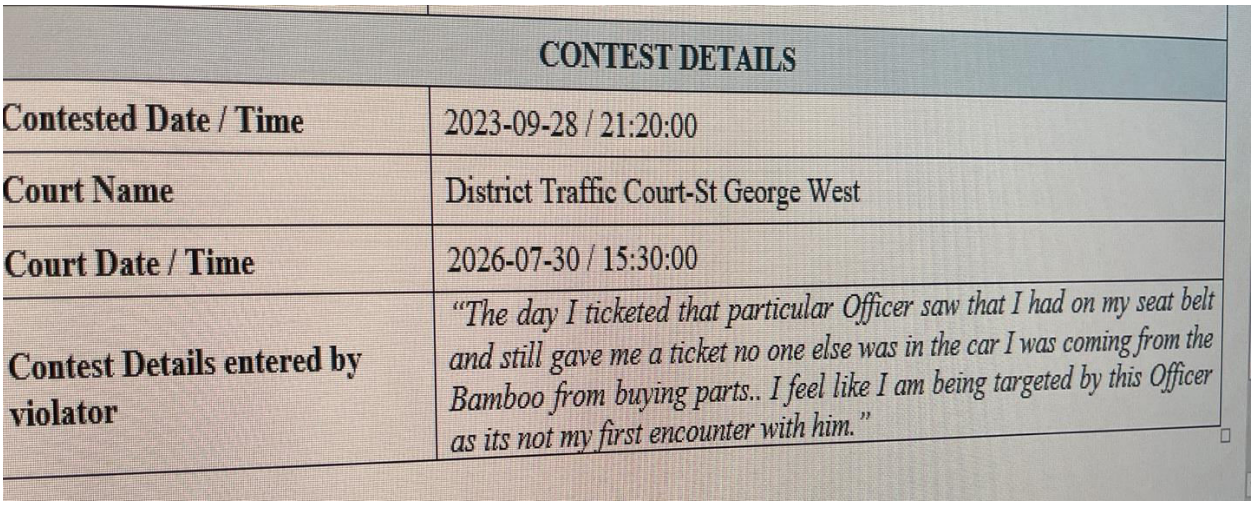
Communication processes within TECU are not confined to exchanges with the public but also extend across agencies. Field observations noted that information sharing between TECU, police officers, and the Judiciary depend on both the system's connectivity and staff expertise.

> "A call from an external stakeholder (a police officer) seeking advice on how to proceed with imposing sanctions was dealt with in the following way: a check of the system to see the specific particulars of the case and another check with the 'Bible' the act that governs the use of the system" (Field Notes Observation 1).

This practice reflects how communication remains anchored in both legal and technological competence, ensuring that automated actions remain consistent with legislative intent.

Technology has also altered how communication is evidenced and interpreted. Devices used by field officers "can take pictures, video, and audio which now allows officers in the field to record significantly more information than before. On the back end, administrators of the UTurn system as well as the Judges in the Judiciary… can see more evidence of the alleged infraction" (Field Notes Observation 2). The inclusion of multimedia evidence enhances the communicative reach of each enforcement act, extending its visibility beyond the moment of issuance to administrative review and legal adjudication.

As the main repository of this data, TECU is "constantly sought after to either explain or provide information" (Field Notes Observation 2). This role reinforces the organization's position as both an operational and communicative hub, responsible for translating system data into explanations and justifications for other actors. Visual evidence of this interconnectivity is captured in the Contest Details Screen (Figure 26), which shows the amalgamation of three data sources: Motorist, UTurn, and the Judiciary Information Management System. The integration of these systems demonstrates how communication processes are now mediated through digital coordination rather than fragmented correspondence.



CONTEST DETAILS	
Contested Date / Time	2023-09-28 / 21:20:00
Court Name	District Traffic Court-St George West
Court Date / Time	2026-07-30 / 15:30:00
Contest Details entered by violator	*"The day I ticketed that particular Officer saw that I had on my seat belt and still gave me a ticket no one else was in the car I was coming from the Bamboo from buying parts.. I feel like I am being targeted by this Officer as its not my first encounter with him."*

Figure 26. *Contest Details*

Finally, communication also plays a role in how citizens rationalize their interactions with the system. As one interviewee observed, "When people are being disqualified, the reason they will be saying, 'Well, I didn't actually kill nobody. I didn't hold up anybody. I didn't have a knife against anybody'" (TECU Interview #2). This statement, though simple, captures the discursive dimension of enforcement, how citizens interpret, narrate, and respond to administrative sanctions through moral or emotional reasoning, and how TECU staff must navigate these exchanges through both empathy and adherence to protocol.

The results highlight that communication within the UTurn system operates as a core organizational process. Through digital correspondence, inter-agency coordination, evidentiary documentation, and discursive engagement with citizens, the system structures how information is exchanged, interpreted, and legitimized across complementary organizations. While technological mediation enhances efficiency and transparency, it also generates new interpretive work for staff, who must translate between legal requirements, system outputs, and citizens lived understandings of sanction and fairness. Communication, therefore, emerges as an ongoing organizational accomplishment, one that sustains coordination, accountability, and legitimacy by bridging law, data, and everyday experience.

At the same time, the results reveal important tensions and limitations inherent in AI-mediated enforcement. While the UTurn increased consistency, traceability, and procedural accountability, it also introduced new challenges related to data integrity, system rigidity, and contested outcomes. Errors, delays, or mismatches in system records, particularly during ticket and demerit point verification, often became flashpoints in staff–public interactions, raising questions of fairness and accuracy. In these moments, trust was not secured by the system itself but depended on staff members' communicative labor to explain, interpret and collaborate to resolve tensions. These challenges demonstrate that automation does not resolve questions of legitimacy; rather, it redistributes them, requiring ongoing negotiation between system authority, human judgment, and public expectations of fairness.

The findings to RQ 2 show that decision-making within the Transport Enforcement Centre Unit has been fundamentally reconfigured through the interweaving of automation, legal frameworks, and inter-agency connectivity. The UTurn system does not replace human judgment but restructures it, embedding legislative authority directly into everyday practices while redistributing responsibility across automated processes, administrative verification, and real-time coordination with external actors. Decision-making now unfolds through a triangulation of system-generated data, statutory requirements, and human interpretation, producing greater traceability, consistency, and oversight, while simultaneously introducing new tensions related to access, trust, and procedural fairness.

As staff navigate digital workflows, contested sanctions, and uneven public engagement, authority is enacted not solely through technological enforcement, but through continuous monitoring, explanation, and adaptation. This therefore demonstrates that AI-mediated decision-making in public-sector contexts operates as a sociomaterial accomplishment, one that depends

on the ongoing alignment of law, technology, and human labor to sustain legitimacy, accountability, and organizational coherence.

5.3 AI in Practice: Everyday Use, Tensions, and Organizational Learning (RQ 3)

> "Mr. Leach, if you want to get a true idea of how the UTurn works you will have to go on an exercise" (Conversation with the Transport Commissioner, October 2023).

This statement proved to be an important precursor to the field exercises conducted during the study. It highlighted that to truly understand the UTurn in practice, it was necessary to examine how it functioned on the ground, particularly in the interactions between Transport Officers and the motoring public. These exercises offered valuable insight into how the system reshaped enforcement, reconfigured officer responsibilities, and altered the dynamics of citizen–state engagement.

Prior to the UTurn, roadside interactions between Transport Officers and motorists were heavily dependent on paper tickets and manual reporting, often resulting in long delays and errors. With the UTurn, officers now operated through a digital platform, supported by handheld devices and interconnected systems. This shift not only expedited enforcement but also introduced new layers of transparency and accountability. Officers described how public interactions often involved motorists attempting to contest or deflect responsibility. The UTurn system provided them with tools to immediately verify claims in real time, shifting the dynamic of these engagements.

Thus, rather than reducing officer–public interaction, the UTurn reconfigured it, officers became not only enforcers but also educators, bridging the gap between the digital system and citizens' ability to navigate it. The act of capturing photos, videos, and timestamps during

roadside checks became part of demonstrating transparency, ensuring that enforcement actions could withstand later scrutiny.

These exercises revealed how the UTurn reconfigured the interaction between Transport Officers and the public, the system shifted roadside engagements from paper-based to digital processes, empowered officers to verify claims in real time, and positioned them as both enforcers and interpreters of the technology. Yet, these changes also exposed tensions, particularly around accessibility, trust, and the digital divide, requiring officers to navigate new challenges while upholding the legitimacy of the system in everyday practice. This section is support by the data analysis in Appendix C, which incorporates ethnographic interviews, observation/shadowing, video ethnography, pictures and field notes.

5.3.1 Reconfigurations of Interactions with the Public

The end users of the UTurn system are the motorists in Trinidad & Tobago and as a group they are most impacted by the effective functioning of the system and the use of the system by the various agents. Their engagement with the system is mandatory once they have been stopped and assigned demerit points. Their interaction and responses to the technology address how they feel about their agency within the system. The quotes highlight the tension between the new digital processes and existing practices or capabilities of some citizens. This suggests a gap between the capabilities of the new system and the public's understanding or willingness to engage with it. Observation of the road exercises revealed how the UTurn shifted the dynamics of interaction, embedding digital technology into everyday enforcement while creating both efficiencies and new tensions.

Transport Officers described how their use of handheld devices (Figure 27), fundamentally changed roadside engagements. Instead of relying on paper-based processes or

verbal claims, officers could access the Vehicle Management System (VMS) and the UTurn records in real time, confirming the legitimacy of a driver or vehicle on the spot. One officer explained, “So, with that now, I have access to the system within Licensing, apart from dealing with the TECU aspect of things. I can check the VMS system, the Vehicle Management System, to see who the vehicle is registered to that you are driving” (Licensing Officer, Ethnographic Interview, Feb 9, 2024).

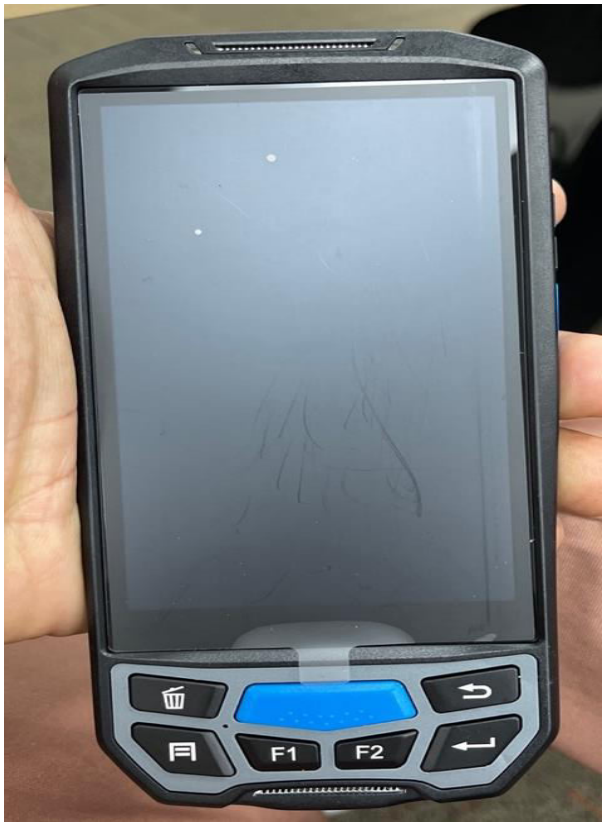


Figure 27. *Handheld Device Connecting Officers to the UTurn System*

The capacity to conduct such instant checks reconfigured roadside enforcement, as officers’ authority now derived as much from the system’s records as from their presence on the scene.

These field practices are illustrated in Figure 28, which shows a roadside exercise involving Licensing Officers and police, the UTurn actively shaped the interaction, as officers

validated claims and guided motorists through the consequences of their offences. In these encounters, authority is no longer enacted solely through officer discretion or physical presence but is co-produced through system records, real-time verification, and the officer's capacity to translate digital information into legitimate and intelligible action for motorists.

Figure 28. *Roadside Exercise Conducted by Licensing Officers and Enforcement Personnel*

In some cases, motorists questioned and opposed the automated procedures, insisting on face-to-face engagement, this tension was evident in the reflections of one manager, "For individuals, in order to contest a ticket, you have to do it online. There is no other way… but people still want to come in person" (Management Interview #4). These tension highlights the persistence of traditional expectations of in-person service and the difficulty of ensuring accessibility in a digital-only system.

Officers themselves often became interpreters of the technology, rather than simply issuing penalties, they explained how the system worked, reassured motorists of their right to due process if they felt the ticket was unjustified and confirmed to drivers that their information was

correctly logged. The new operational reality of balancing efficiency and legitimacy was also visible in the ways officers documented their interactions. Figures 29 & 30 capture routine vehicle inspections, where physical checks of drivers, vehicles, and documents were supplemented by digital recording and data gathering. In some cases, officers emphasized the importance of photographs, timestamps, and system-generated records to ensure that enforcement actions could withstand later scrutiny in court. As one officer put it during a field exercise, “When they decide to contest the ticket, all those things are submitted to the court” (Licensing Officer, Ethnographic Interview, Feb 9, 2024).

Figure 29. *Transport Officer Inspects a Vehicle and Takes Pictures as Evidence*

Figure 30. *Licensing Officer Using the Wireless Device to Enter Driver Information into the UTurn App*

These roadside encounters demonstrate that the UTurn system reconfigured public interaction not by eliminating human engagement but by reshaping how legitimacy, authority, and agency are enacted in everyday enforcement. Motorists encountered a process that was faster, more traceable, and less negotiable, yet increasingly dependent on their digital literacy and willingness to engage with system-mediated procedures. Officers, in turn, balanced their role as enforcers with new responsibilities as interpreters and guides, translating system outputs into explanations that could be understood and accepted by the public. Public interaction thus emerged as a hybrid practice, where technology structured the encounter, but legitimacy continued to be negotiated in situ through communication, explanation, and embodied presence. In this sense, the UTurn's impact on public interaction reflects a broader shift toward digitally mediated governance that remains fundamentally relational in practice.

5.3.1.1 Tensions Related to Privacy and Power

The implementation of the UTurn also generated new tensions related to privacy and power, as the system's expansion of traceability and information-sharing raised concerns among both officers and the public. For Licensing Officers, the UTurn brought an unprecedented degree of visibility into motorists' histories, addresses, permits, fines, and prior violations could all be retrieved in real time. While this enhanced enforcement capacity, it also created suspicion among members of the public who questioned how their personal information was being used.

One officer recounted how routine address verification was often met with hostility and accusations that the Licensing Authority was overstepping its role:

> "People started accusing us: 'Why all you want to do that? You are trying to find out where I am living.'
> 'All you want to deal with the property tax.'
> 'No, ma'am.'
> We said, 'What happens is, we do that because people apply for their license under false pretense, in terms of applying for their driver's license and the address they have is not where they are at, they are somewhere else.'"
> (UTurn Field Officer, Ethnographic Interview #1, Feb 9, 2024).

This account shows how attempts at ensuring accuracy and compliance were interpreted by citizens as surveillance, linking traffic enforcement to broader anxieties about government monitoring. The very practices designed to enhance legitimacy, and transparency could, in practice, undermine public trust by evoking fears of overreach.

At the same time, officers were very aware of how power operated in reverse. Motorists developed informal networks to evade detection, using WhatsApp groups to warn one another of enforcement exercises. Officers themselves monitored these channels, navigating a complex interplay of visibility and counter-visibility, “Jason, they call us white shirts. Even in all the WhatsApp groups, they talk about be on the look out for the white shirts. They don’t know we are in the WhatsApp groups as well, so we know when they send out a message” (Ethnographic Interview #2, Feb 9, 2024).

Such dynamics highlight how the UTurn not only empowered officers with real-time information but also reshaped the broader conversation around surveillance, where citizens actively opposed adaptation to the new system. This constant negotiation underscores that power is never absolute; it is contested in the everyday practices of both enforcement and evasion.

The tension extended to officers themselves, while the UTurn created greater accountability by making their decisions traceable, it also reduced their individual discretion. Every action taken in the field was logged and could later be audited, leaving little room for informal resolution.

These findings show that the UTurn’s promise of transparency is inseparable from the tensions it generates around privacy and power. For motorists, expanded traceability evokes concerns about surveillance and misuse of personal information, even when practices are framed as administrative verification. For officers, the same system that enhances enforcement capacity simultaneously constrains discretion by rendering actions permanently visible and subject to audit. Power, in this context, is not centralized or unidirectional but negotiated through everyday practices of monitoring, evasion, explanation, and accountability. This demonstrates that privacy and power are not abstract policy concerns but lived dimensions of digitally mediated

enforcement, continuously shaped through interaction between citizens, officers, and the technological infrastructure that connects them.

5.3.1.2 Tensions Related to the Legitimacy of Authority

The introduction of the UTurn into road enforcement practices has raised complex questions about the legitimacy of authority. While the system was designed to standardize enforcement and minimize opportunities for bias, the very efficiency and rigidity it introduced also reshaped how motorists perceived the fairness of penalties and the authority of Licensing Officers.

Several officers reflected on how the UTurn amplified their ability to enforce the law by revealing multiple violations at once. This created unease among motorists, who often interpreted the simultaneous issuing of penalties as excessive or unfair. One officer explained:

> "We might give a ticket for an inspection sticker, but then the driver might have a broken light, or they might have a window that isn't working. All of those things are a charge, but we will not necessarily give a ticket for all of them if the driver cooperates" (Licensing Officer, Ethnographic Interview #2, Feb 9, 2024).

Here, discretion remained central, officers could choose whether to issue every possible penalty and motorists were acutely aware of the expanded scope and ability of enforcement officers to issue penalties, which sometimes escalated tensions. Another officer recalled:

> "There was a lady I ended up giving about 9 demerit points. She wants to argue about an issue and her husband was keeping quiet. He knew she was wrong, but she kept arguing, she could have saved herself a lot of aggravation, but she wanted to be difficult" (Licensing Officer, Ethnographic Interview #2, Feb 9, 2024).

The officer's account embodies the double-edged nature of legitimacy: while the technology provided incontrovertible evidence of violations, the perception of fairness hinged on the interaction itself. Motorists could interpret the strict application of multiple sanctions as a misuse of authority, even if the system technically justified it.

In some cases, legitimacy was tested not only through arguments about fairness but also through open defiance. During one road exercise, a driver attempted to evade an impromptu stop, misleading officers about his license status. A quick check of the system revealed that he had not held a valid license since 2018. The encounter escalated as officers surrounded the vehicle, asserting their authority through both their physical presence and the verification power of the system.

> While we are driving back to the headquarters, the Licensing Officer spots a car in the opposite lane and driver does not have on his seatbelt. The Licensing Officer turns on the siren and motions to the driver to pull over. The driver tried to put the car in reverse to evade being stopped but both Officers jump out of our vehicle. The trailing Licensing Vehicle also pulls over to block the car from escaping. The car is now surrounded by 4 officers while the driver of the stopped vehicle tries to put on his seatbelt.
>
> Heard from the back of the Licensing Vehicle:
> "You didn't see me trying to stop you? Why did you try to drive off?"
> (Field notes, Maracas Exercise, Feb 9, 2024).

The driver of the grey car, in Figures 31 & 32, was not wearing a seatbelt and attempted to mislead Officers about his license. Checks to the system revealed he had not held a license

since 2018. This example highlights the dual dimensions of legitimacy in practice: while motorists may challenge or attempt to evade enforcement, the UTurn system equips officers with an evidentiary foundation that strengthens their claims to authority. Yet, the visibility of this enforcement power also underscores the tension between efficient sanctioning and the public's perception of fairness.

Figure 31. *Licensing Officers Surround a Vehicle That Tried to Evade an Impromptu Stop.*

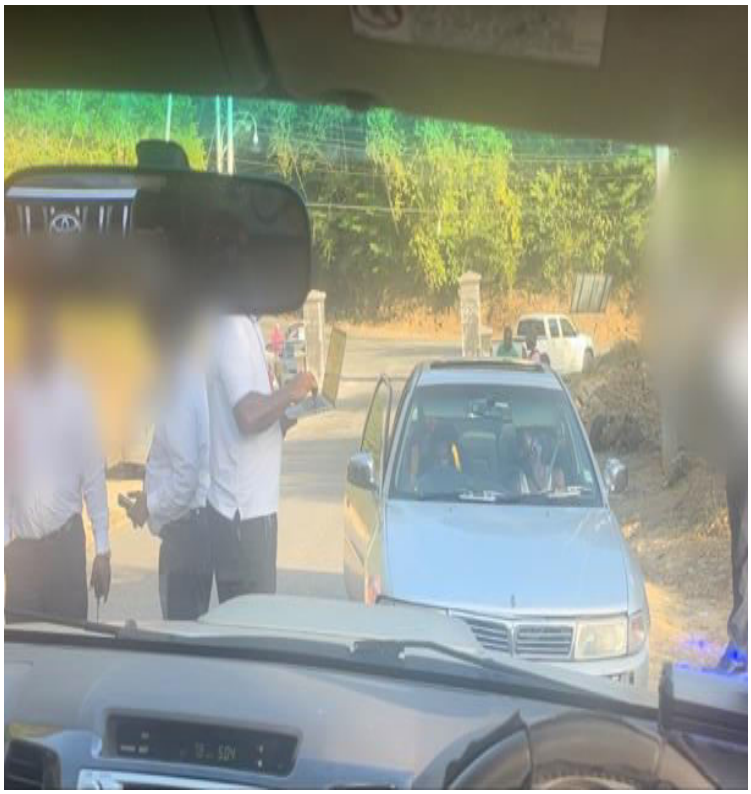


Figure 32. *UTurn Officer Checking Driver Information on the Laptop; Confirms that Driver does not Have a License and the Vehicle is Not Registered in the Driver's Name*

One of the officers involved in the stop pictured in figures above, noted that the extent of the violations uncovered through accessing the UTurn and other complementary systems, demanded an immediate and uncompromising response:

> "They overdoing it. No license, no insurance, no inspection sticker, he bought a car from somebody and has no transfer documents (obscene language). I had to give him a kite tail (see Figure 33). Drivers like that must go from not having a license to not being able to get a license so I gave him enough tickets and demerit points to have his license suspended immediately. Easy about a 4 or 5 thousand dollars in penalties, could be more. They are driving on the road and endangering people's lives" (Licensing Officer, Ethnographic Interview #2).

Figure 33. *Licensing Officer Printing a Long List of Tickets, Referred to as A "Kite Tail"*

This account underscores both the practical authority of officers to impose sanctions and the tensions such actions generate. While the officer framed the penalties as a matter of protecting public safety, for the motorist the scale of fines and demerit points could easily be perceived as excessive, raising further questions about the legitimacy of enforcement practices.

Concerns over legitimacy also extended to how the public engaged with contestation processes. With the UTurn requiring motorists to contest fines exclusively through digital platforms, citizens often challenged the authority of the system itself. As one officer noted, many still preferred face-to-face engagement, seeing online-only mechanisms as limiting their right to due process. This reluctance was particularly pronounced among older citizens and those less comfortable with digital systems, producing a cultural gap in how legitimacy was recognized.

These accounts show that the UTurn redefined what it meant for enforcement to be legitimate. The system enhanced officers' authority by centralizing evidence and ensuring that

sanctions were linked to the corresponding legislation however, the same efficiency and standardization sometimes undermined perceptions of fairness, especially when multiple penalties were issued simultaneously or when digital-only contestation was viewed as inaccessible. The legitimacy of authority, therefore, was not secured solely by legislative backing or confidence in the technology ability to be accurate, it was continuously negotiated in the everyday practices of roadside interactions, shaped by discretion, tension, and the public's expectations of fairness.

5.3.2 Reconfiguration of Workspace to Monitoring and Control in Real-Time

The introduction of the UTurn reshaped not only how penalties were issued but also the very organization of the workspace, extending monitoring and decision-making into the field. What were once paper-based, office-bound processes became mobile, connected, and responsive in real time. Officers described how their daily tasks now required continuous coordination with the Traffic Enforcement Center Unit, ensuring that enforcement decisions could be verified and acted upon without delay. As one field officer explained:

> "We call the Traffic Enforcement Center Unit, we give them the driver's permit, they concur with the name on the permit and they do up the documents, process it, and email it to my email and from there I print it and an officer will issue the documents to them, whether it is an intent for disqualification or giving a disqualification notice"
> (UTurn Field Officer, Ethnographic Interview #1, Feb 9, 2024).

These exchanges highlight how the workspace is no longer confined to the Licensing Authority's offices but is distributed across multiple nodes of activity, with officers in the field

being supported by the TECU's digital infrastructure. Real-time verification was critical to these operations. As the same officer recalled:

> "Liaising with TECU, in terms of on-the-road operations, you might meet some people and when you check, they have points, but they will tell you, 'I have been served already. I have 14 days in which to...' 'All right. Cool, no problem, but let me confirm.' I will call TECU office. And liaise with them to confirm whether this person with this driver's license number so, so, so... 'I just want to confirm that they were ever served or what'" (UTurn Field Officer, Ethnographic Interview #1, Feb 9, 2024).

These examples show how verification and control were reconfigured into a loop of constant communication between Transport Officers on the field and TECU. The workspace became less about independent officer judgment and more about confirming, validating, and documenting through digital systems in real time. The introduction of the UTurn reshaped not only how penalties were issued but also the very organization of the workspace, extending monitoring and decision-making into the field. What were once paper-based, office-bound processes became mobile, connected, and responsive in real time. Officers described how their daily tasks now required continuous coordination with the Traffic Enforcement Center Unit, ensuring that enforcement decisions could be verified and acted upon without delay. As one field officer explained:

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> whether it is an intent for disqualification or giving a disqualification notice" (UTurn Field Officer, Ethnographic Interview #1, Feb 9, 2024).

These examples show how verification and control were reconfigured into a loop of constant communication between Transport Officers on the field and TECU. The workspace became less about independent officer judgment and more about confirming, validating, and documenting through digital systems in real time.

This reconfiguration was not only organizational but also material, Officers described how initial practices of escorting drivers back to the office to be served were replaced by the introduction of mobile setups in the field. One officer recalled how this shift was initiated:

> "Through the Commissioner going on the road and we are checking the drivers and the drivers' licenses, we realized the high points they had on their licenses, and then what we did, we had to line them up and bring them back to the office here to be served. We realized, you know what, it is taking up too much time. So, the boss came up with the idea, you know what: Laptops, printers, a wireless device and connected into the system" (UTurn Field Officer, Ethnographic Interview #1, Feb 9, 2024).

Field observations confirmed how this mobile office operated in practice, the UTurn Field Officer on the road set up laptops, modems, and printers in the back of a van to process documents on site. During one exercise, a driver with 14 demerit points was immediately issued an "Intent to Disqualify" letter, printed on the spot, which gave him 14 days to respond to the Commissioner. In this way, what was once a process that demanded office visits and long delays was instead compressed into a single roadside encounter.

These accounts demonstrate how the UTurn reconfigured the workspace by collapsing the boundaries between field operations and central administration. Real-time monitoring and mobile connectivity enabled officers to act as extensions of the Transport Division, ensuring that verification, documentation, and sanctions could all be executed seamlessly in the field. Yet this transformation also altered the rhythms of work, embedding officers more tightly into a system of continuous oversight and reducing the discretion that once came with paper-based processes. The workspace, in other words, became not only mobile but also more tightly bound to the logic of monitoring and control in real time.

5.3.2.1 Real-Time Monitoring and Control

The UTurn system fundamentally altered the temporal and the practice of enforcement by embedding decision-making into live processes of verification and control. Under the previous iteration of the Transport Division, monitoring relied heavily on manual record-keeping and paper trails. Officers often had to return to the office or wait for documents to be produced before any further action could be taken. By contrast, the UTurn reconfigured monitoring into a continuous and dynamic process, in which roadside encounters were immediately linked to the centralized database.

Field officers described how, during roadside stops, they could now verify a driver's status on the spot by calling the TECU, who then generated and returned the necessary documentation. As one officer recalled:

> "We call the Traffic Enforcement Center Unit, we give them the driver's permit, they concur with the name on the permit and they do up the documents, process it, and email it to my email and from there I print it and an officer will issue the documents to them,

> whether it is an intent for disqualification or giving a disqualification notice" (UTurn Field Officer, Ethnographic Interview #1, Feb 9, 2024).

This practice reveals a redistribution of authority: the officer's role is no longer to independently decide or prepare paperwork but to serve as the connective point between motorist and TECU, ensuring that decisions are validated and processed through the system before action is taken.

The immediacy of this process was reinforced in another account, where the officer explained how claims made by motorists had to be checked and confirmed before any decision was finalized:

> "Liaising with TECU, in terms of on-the-road operations, you might meet some people and when you check, they have points, but they will tell you, 'I have been served already. I have 14 days in which to...' 'All right. Cool, no problem, but let me confirm.' I will call TECU office. And liaise with them to confirm whether this person with this driver's license number so, so, so... 'I just want to confirm that they were ever served or what,' and they will treat with it. They will call me back, '(redacted), hear what is going on. That person has been served. You could release him because...'" (UTurn Field Officer, Ethnographic Interview #1, Feb 9, 2024).

Such accounts highlight how discretion, once exercised by officers in the field, has been curtailed by the requirement to validate actions through TECU. Real-time monitoring thus becomes both a safeguard and a constraint: while it ensures that decisions are grounded in up-to-date records, it also embeds officers within a system of constant oversight, where authority flows through centralized nodes rather than remaining at the roadside. Real-time monitoring operates

as a mechanism of control, not by replacing officers' judgment, but by channeling it through continuous verification and centralized authorization.

This transformation was also visible during field exercises, Transport Officers could move seamlessly from identifying an infraction to generating and issuing sanctions, supported by the mobile office setup as seen in Figures 34, 35 & 36.

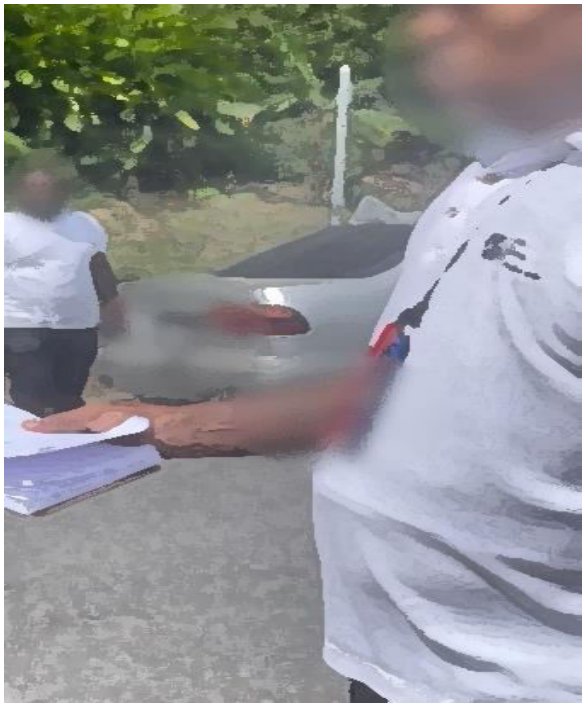

Figure 34. *Motorist Stopped for Not Wearing a Seatbelt*

A check of the record revealed that the driver had been issued several tickets for the same offense. Having exceeded the threshold for demerit points, the UTurn Officer generated an "Intent to Disqualify." The process continued with the driver's acknowledgment of the sanction as seen below in Figure 35. Once the document was issued and signed, this information became part of the digital record, accessible to multiple actors across the system.

Figure 35. *Driver Signs Form in The Presence of a Licensing Officer. This Information Is Now Available to Multiple Users of the System.*

Finally, the mobile office at the roadside provided a hub for verification and coordination, ensuring that every step was recorded and that officers were acting on validated information. The mobile office (Figure 36) was pivotal in verifying that the driver had in fact committed multiple previous offenses and thus the Transport Officer could issue the necessary penalty based on the data.

Figure 36. *Officers Confer at the Back of the Mobile Office to Get More Information About a Motorist's Driving Record.*

Together, these practices reveal that real-time monitoring under the UTurn is not simply about speed but about reconfiguring authority and accountability. By enabling officers to verify, document, and communicate instantly, the system reduced ambiguity and inconsistency that once marked enforcement. Yet this same immediacy came at the cost of officer autonomy, embedding roadside encounters within a broader framework of centralized oversight and system validation.

5.3.2.2 Synchronization of Shift-time

The implementation of the UTurn also reconfigured the way Licensing Officers structured their daily work rhythms. Previously, shift start and end times, were largely dictated by organizational constraints or management discretion, with officers often beginning duties based on localized needs or staggered schedules. The integration of the UTurn introduced a new form of synchronization, that facilitated officers to align their work hours with other agencies that were simultaneously accessing the same data.

This shift was not only technical but also organizational, officers described how the system's real-time requirements demanded punctuality and consistency, reducing flexibility in how shifts were managed. One officer reflected on how this new practice altered the flow of their work, "Once your shift starts, the system expects you to be logged in and aligned with the others. It is not like before when you could ease in. Now, if you are not on the same time, it throws everything off, because the records and the monitoring don't line up" (UTurn Field Officer, Ethnographic Interview #1). Real-time monitoring operates as a mechanism of control not by replacing officers' judgment, but by synchronizing it through continuous verification and centralized authorization across shifts.

The emphasis on synchronization illustrates how automation reshapes not only decision-making but the temporal organization of work itself. By aligning officers' shifts with TECU's operational schedule, the UTurn system promotes consistency, coordination, and continuity across enforcement activities. At the same time, this synchronization constrains the informal flexibility that once characterized field operations, embedding officers' work rhythms within a shared temporal framework governed by system requirements rather than individual discretion.

5.3.2.3 Dislocated Workspace

The introduction of the UTurn system fundamentally altered the spaces in which employees perform their duties, producing a dislocated workspace. Whereas enforcement and monitoring were once confined to fixed offices and courtrooms, work is now increasingly carried out in mobile and improvised settings, during road exercises, supported by a mobile office at the back of a vehicle, and through handheld devices linked directly to the central system. This shift reflects how organizational routines are being reconfigured to extend authority and monitoring practices into dispersed environments.

As one officer explained during a roadside exercise, the technology has not only changed the locations of their daily practices but also how they support and enforce decisions, “We no longer have to wait until everything comes back to the office. The check, the decision, even the disqualification can happen right there on the roadside” (Licensing Officer, Ethnographic Interview #3). This relocation of organizational practice demonstrates how the UTurn system effectively moves the workspace into the public domain, embedding enforcement processes into everyday interactions with motorists.

The use of mobile offices exemplifies this transformation vividly, officers were observed consulting laptops and handheld devices in the trunks of vehicles, using wireless connections to access driving records, issue tickets, and in some cases initiate disqualification notices. The roadside became a temporary office, blending physical enforcement with digital monitoring in ways that disrupted traditional distinctions between fieldwork and office work. For example, in one case an officer reviewed a motorist’s record directly from a mobile station and, finding no outstanding issues, released the driver without charge (see Figure 37).

Figure 37. *Officer Checks Driver's Record Via the Mobile Office, Driver Has No Issues and Is Released Without Further Charge*

This mobility is not simply a matter of convenience but also a strategic reconfiguration of organizational control. By enabling decisions to be made in real time and away from fixed institutional spaces, the UTurn system centralizes authority through its digital infrastructure, while simultaneously dispersing the physical locations of work. Officers themselves expressed ambivalence about this change: while it allows for greater efficiency and speed, it also requires them to adapt to precarious, ad hoc workspaces and to manage tasks under heightened public scrutiny.

This spatial reconfiguration also altered the organizational boundaries of the Transport Division by extending institutional authority beyond formal offices into public and nebulous spaces. Roadside locations, vehicles, and mobile offices became legitimate sites of organizational action, blurring distinctions between internal administrative space and external public space. In this configuration, officers operating in the field function not as peripheral actors but as mobile extensions of the organization, while TECU's digital infrastructure anchors

authority centrally. Organizational boundaries are thus no longer defined by physical walls or fixed locations but by connectivity to the system, enabling enforcement, documentation, and decision-making to occur wherever verification can be established in real time.

The dislocated workspace exemplifies how digital infrastructures reshape not just tasks, but the very spatial and organizational arrangements of public service. By turning sidewalks and roadside stops into legitimate extensions of the office, the UTurn system demonstrates how compliance, enforcement, and decision-making have become inseparable from the assemblage of technology, officers, and the public space in which they operate.

5.3.3 Interweaving and Recursive Use of the UTurn System to Support Decision-Making

The UTurn is a data intensive system, processing massive amounts of information and making the relevant data available to the various users. Licensing Officers can access the information that is pertinent to the execution of their jobs, TECU as the central hub is able to access more information, tailored to the different functions in the department and motorists have their own portal where they upload information as well as access information about their demerit points and status of their license. As a complementary system, the Judiciary accesses the UTurn to assist in planning, record keeping and for evidentiary purposes. The senior policy makers access the data to inform macro decisions about how the organization should arrange its functions in response to the information.

Concurrent to the processing and provision of information, the UTurn also collects data from its multiple points of interaction. The issuing of tickets and demerit points, become part of the record of drivers as they are entered by Licensing Officers and are as such part of the larger database of information. So simultaneous to the provision of data is also the collection of data, creating a recursive system of information dissemination and gathering as evidenced in the

statement, “To be honest it makes everything easier. I could pull up whatever the charge is and then issue it accordingly” (Licensing Officer, Ethnographic Interview #3).

5.3.3.1 Access to Real-Time Information to Support Decision-making

The integration of real-time data access into enforcement practices has significantly transformed how Licensing Officers carry out their duties. With the UTurn, officers are no longer dependent on paper records or delayed verification; instead, they can retrieve and validate information at the point of interaction. Decisions are now supported by current, accurate data, allowing officers to verify compliance with previous tickets, confirm vehicle details, and identify infractions on the spot. This immediacy enhances both responsiveness and consistency, ensuring that enforcement actions are based on verifiable, system-generated information rather than recollection or assumption. As one field officer explained:

> “And by using those apps, more or less you more use it for the driver's license to check for points. Once we access that, like just now there with the driver, I accessed his driver's permit — his permit number and his date of birth. All the information came up on it that he has Class 3 for light motor vehicle, he has class 4 for a heavy motor vehicle, and I go into if he has ever been issued tickets or notices for demerit points” (UTurn Field Officer, Ethnographic Interview #1, Feb 9, 2024).

The capacity to access such data in real time reshapes the character of roadside decision-making. Officers described how the technology empowered them to act immediately and with confidence. In one observation, a driver was found operating a heavy motor vehicle while holding only a light motor vehicle license. By consulting the system, the officer could determine not only the validity of the license but also whether the driver had prior infractions, thus deciding whether to

issue a warning or assign demerit points. The same mechanism allowed officers to confirm when drivers possessed the correct license but lacked the physical card, avoiding unnecessary penalties.

Real-time access therefore eliminates opportunities for motorists to obscure or falsify information while strengthening procedural fairness and accountability. Another officer emphasized how integrated systems support on-the-spot audits and verifications, “Where things started to change, in terms of, ‘Something is wrong with this vehicle, you know.’ So, I do the audit, access to the VMS system, which I do, and then we tap into it and when we check we realize, you know, right vehicle, wrong color, or right number plate, wrong type of vehicle” (UTurn Field Officer, Ethnographic Interview #1, Feb 9, 2024).

The recurring use of the term audit among the UTurn staff demonstrates how verification has become a routine element of decision-making. Officers draw upon complementary systems such as the Vehicle Management System to cross-reference data, combining technological precision with experiential judgment. Before digitization, records were fragmented and often outdated, making accurate, timely decisions difficult. The integration of the UTurn with these ancillary systems now enables a comprehensive view of driver and vehicle histories, allowing decisions to be informed by the most current data. Decision-making authority is grounded less in individual judgment or experience and more in the officer’s capacity to correctly interpret, validate, and act upon system-generated evidence in real time.

Collectively, these practices show that real-time information access does more than accelerate administrative tasks, it redefines how decisions are made and justified. Transport Officers act not only as enforcers but as interpreters of data, negotiating between system outputs and live encounters. By embedding information flows directly into roadside practice, the UTurn

creates a new form of data-driven discretion, one grounded in verification, traceability, and organizational accountability rather than personal judgment.

5.3.3.2 Provide Data to Inform the System

There are several sources of data that inform the UTurn system, for example, the digitization of existing records, and the information submitted by motorists such as address and biometric data. However, Transport Officers are among the key contributors to the system's data, once they log on, the system records their name, location, and time. Every ticket they issue becomes directly linked to their profile, ensuring accountability and traceability, officers function as epistemic agents, whose routine acts of observation, documentation, and verification produce the data upon which organizational knowledge, accountability, and legal validity depend. This data is available for supervisory audits, can be accessed by the courts if a ticket is contested, and is visible to motorists through their user portal.

All this information is used to build an expanding database that produces system-generated statistics on both driver and officer behaviour. The emerging patterns in these datasets inform not only policy decisions at the macro level but also operational decisions. As Figure 38 shows, a Transport Officer photographs a vehicle to upload as evidence to the UTurn system. Such practices show how the everyday work of officers feed into the overall data that sustains the legitimacy and efficiency of the system.

Figure 38. *Licensing Officer Takes a Picture of a Motorist's Vehicle to Upload to the UTurn as Evidence*

The use of devices with photo and video capabilities has transformed field enforcement into a process of real-time evidence creation. Officers employ these tools to document every stage of an encounter, producing a digital record that can later serve in court or administrative review. As noted during one road exercise, “LO takes pictures of the vehicle as a means of building a case file in the event the information is contested” (Videorecording 1, Maracas). This practice has become integral to establishing certainty. Another observed exercise documented that officers not only photograph vehicles and license plates but also record signatures when notifying drivers that their licenses will be suspended, “Driver signs the official document notifying him that his license will be suspended for exceeding the demerit points” (Videorecording 2, Maracas).

Officers themselves articulate the logic behind this process of evidence gathering:

> “Let’s say we set up a roadblock just down the road, but there is a street coming, but there is a sign saying no entry between these hours… We go across now and we take a

> pic of the street sign that was posted and add it to their comments on the device. So, whenever they decide to contest, all those things are submitted to the court"
> (UTurn Field Officer, Ethnographic Interview #1 Feb 9, 2024).

The devices thus enable a complete and verifiable chain of evidence, ensuring that what is recorded in the field can be reproduced in legal proceedings. Officers emphasized that these recordings are vital because "every issuing of a ticket can be contested," making it essential to "retain as much evidence as possible at the traffic stop" (Field Notes, Oct 11, 2023).

In addition to photographic data, the system also relies heavily on the accuracy of information supplied by motorists, Transport Officers play a crucial role in verifying this information during their interactions with drivers:

> "For instance, if somebody says they have a license, but they don't have it on them… I pull it up on the system. If it shows up as 'not found,' it is because you were never issued a license. And with further interrogation, people confess that, no, they were never issued [one]" (UTurn Field Officer, Ethnographic Interview #1 Feb 9, 2024).

This interaction underscores how system data both reveals and enforces compliance. The absence of a digital record becomes itself a signal of wrongdoing, illustrating the recursive relationship between information systems and human oversight. As another officer explained, the process of documenting and submitting evidence does not end at the roadside:

> "When the officers [are] doing up their summary to submit to the court for the court date, the officer will add the witnesses to the document for the court… and then submit the documents to the Prosecutor in the court. All those documents will go to the court and

> when it is time for the court… the person who did the charging and the witnesses will be here" (UTurn Field Officer, Ethnographic Interview #1 Feb 9, 2024).

Collectively, these practices demonstrate how the UTurn system's reliability depends on the meticulous data work of officers in the field. Their contributions ensure that each enforcement action becomes part of a verified and transparent digital record, linking the moment of observation, the act of documentation, and the institutional processes of verification and adjudication.

5.3.3.3 Access to Interconnected Systems

The UTurn does not operate in isolation; its effectiveness relies on its integration with other state systems such as the Vehicle Management System, the Judiciary's case management platform, and TTPost's payment infrastructure. These interconnections allow Transport Officers to retrieve, verify, and cross-reference information instantaneously, creating a seamless flow of data across institutional boundaries. The system's interoperability enables each agency to act within its mandate while maintaining a shared informational space, reducing duplication and increasing administrative coherence.

This access to interconnected databases also transforms the scope of decision-making for officers in the field, an officer can confirm a driver's permit status and check whether the vehicle has any pending legal issues. Such integration ensures that every enforcement action is grounded in the most accurate and current data available. As one officer noted:

> "We have access to more than one system. If we need to check for vehicle details, we use the Vehicle Management System. If we need to check for a ticket or demerit points, we use the UTurn. Everything is connected. Once we enter the information, it cross-checks

and brings up what we need" (UTurn Field Officer, Ethnographic Interview #1 Feb 9, 2024).

Interconnected systems function as an infrastructure of coordination, redistributing decision authority across agencies while enabling enforcement actions to be grounded in a shared, cross-institutional evidentiary framework.

This interconnectedness represents a significant reconfiguration of administrative work in road safety and enforcement. Rather than operating within isolated institutional silos, officers now act within a shared information ecosystem that links verification, enforcement, and adjudication in real time. Access to interconnected systems expands the scope of on-site decision-making while embedding those decisions with partner agencies, reinforcing both transparency and institutional cohesion.

These findings to RQ3 show that the everyday use of the UTurn system fundamentally reconfigured how authority, discretion, and decision-making are enacted in roadside enforcement and field-based practice. Rather than functioning as a detached technological tool, the system became deeply embedded in officers' interactions with motorists, reshaping public encounters through real-time verification, evidence creation, and digitally mediated communication. Transport Officers operated within a hybrid environment where enforcement depended on the recursive interplay between system data, interconnected platforms, and embodied judgment, positioning them simultaneously as enforcers, interpreters, and data producers. While these arrangements enhanced accountability, traceability, and operational efficiency, they also generated persistent tensions around privacy, legitimacy, access, and the negotiation of fairness in highly visible public settings. This section demonstrates that AI in practice operates as an ongoing process of organizational learning, where authority is not fixed in technology alone but

continually produced through the situated alignment of digital infrastructures, human judgment, and the lived realities of citizen–state interaction.

5.4 Chapter summary

The results of this organizational ethnography show how the integration of the UTurn system has reshaped the practices, relationships, and logics of decision-making within Trinidad and Tobago's Transport Division and its connected agencies. Across management, technical, and field levels, the findings demonstrate that artificial intelligence is not merely a technical tool but an actor that redistributes authority, reconfigures organizational processes, and alter the very conditions of public-sector work. The UTurn's implementation has produced new configurations of accountability, linking legal frameworks, data infrastructures, and individual discretion, thereby redefining how governance is enacted in everyday administrative life.

At the policy level, legislation emerged as both a driver and boundary for organizational change. The alignment of processes with the *Motor Vehicles and Road Traffic Act* provided the legal scaffolding through which automation could be legitimized. Managers and officers alike framed their actions through compliance and legal oversight, often invoking the law to rationalize new digital routines. The automation of routine tasks, the digitalization of public interactions, and the use of audit trails collectively advanced transparency and traceability, while also surfacing tensions related to the limits of technological agency and human oversight. These transformations were not uniform: they involved cultural and organizational adaptation, retraining, and the gradual acceptance of frontier technologies as legitimate tools of governance.

At the operational level, the study found that Licensing Officers' use of the UTurn system during field operations exemplified the interdependence between human judgment, data, interconnectivity and automation. Real-time data access, interconnected systems, and mobile

technologies enabled officers to make immediate, evidence-based decisions, reducing administrative bottlenecks and enhancing procedural fairness. Yet, these changes also produced new tensions, particularly concerning privacy, legitimacy of authority, and the shifting boundaries between human discretion and automated governance. These findings help identify that AI systems like the UTurn do not replace decision-making; they reconstitute it, embedding law, data, and human practice into an evolving assemblage that continuously negotiates efficiency, legitimacy, and accountability in public-sector operations.

6 Discussion

This chapter discusses and interprets the study's results of how the UTurn as an AI system mediated interactions in the Transport Division of the Ministry of Works and Transport, both in its structure and its practices. Guided by a practice-based study and sociomaterial stance, the discussion treats technology not as a static tool that determines outcomes, but as one element in an assemblage of people, legal texts, interfaces, procedures, and material settings that together prefigure what actors can credibly do and say in specific moments of work.

The discussion is organized around the study's three research questions: RQ1 (What new practices emerge within a public organization when management implements and uses and AI-mediated system to support decision-making processes?) examines the emergent practices and reengineered processes that took shape with the UTurn's introduction and how these routines are made possible by the coupling of law, technology and organizational procedures.

RQ2 (In what ways did the implementation and use of an AI- mediated system in a public organization reconfigure decision-making practices and organizational dynamics?) moves down one level to the dynamics of decision-making within the organization, focusing primarily, but not exclusively on the Traffic Enforcement Center Unit (TECU). The discussion here examines how roles, accountabilities, and inter-agency connections are reconfigured when legal mandates and automated checks travel across TECU, the Judiciary, the Police Service, and other stakeholders.

RQ3 (How do employees use an AI-mediated system to support their decision-making during their daily work practices?) looks at the situated level of interactional work, describing how officers work with/work alongside the system under real conditions of time pressure, citizen contestation, and performance demands, and how tensions are negotiated in practice.

To maintain analytic consistency across sections, each theme (and subtheme) follows the same four moves: (1) Core theme, a concise empirical claim supported by quotes or pictures from the data; (2) Link to theoretical framework, situating the finding within the theoretical framework lens (e.g., practice based studies, sociomateriality, agencement, ventriloquism); (3) Link to literature, putting the finding in dialogue with relevant work that was highlighted in the literature review; and (4) Contribution, what this study adds empirically, theoretically, and practically.

This chapter intends to show how the results answer each research question and to specify what, exactly, the case of the UTurn reveals about AI mediated governance in practice. It will rely on the strongest data from observations, interviews and documents.

6.1 The Social and Legislative Context of the UTurn: Emerging Organizational Practices

The UTurn system did not arrive as a neutral or isolated technical upgrade. Its design, legitimacy, and everyday use was prompted by a wider social and legislative context marked by long-standing concerns about discretion, corruption, and public distrust, alongside a reform agenda that sought more transparent enforcement. The Transport Division had long been plagued with allegations of inefficiency and corrupt practices that contributed to a disenfranchised public and poor perception by key stakeholders. Amendments to the MVRT Act provided the legal foundation that both authorized the UTurn's deployment and structured key functionalities e.g., the realignment of offenses to statutory provisions, standardized demerit schedules, audit trails, and the decriminalizing of traffic offenses.

Framed this way, the UTurn can be understood not as a technical intervention layered onto existing work, but as a sociomaterial assemblage through which legal authority, organizational routines, and technological artefacts are mutually constituted in practice.

Management's role was not merely to adopt or implement the UTurn, it was to address the concerns emanating from a charged social context of public distrust and perceived inequity by using a legislative mandate of the MVRT to enact the government's technological response to the social concerns. What materialized were concrete, repeatable practices and policies that would guide the operations of the Transport Division.

Practically, this took the form of managerial decisions that: (a) standardized practices across multiple sites of the Transport Division, (b) reframed authority within the organization, shifting responsibility to the Transport Commissioner and (c) reconfigured how accountability is demonstrated through time-stamped audit trails visible to supervisors and courts. Those choices turned the Act into workflow rules (e.g. TECU workflows are modelled after the Act), producing the recognizable routines as described in the results. These managerial decisions did more than streamline processes; they made the legislation operational within everyday work, giving guidance to what actions could be taken, justified, and defended within the organization.

Concretely, management framed the UTurn in memos, briefings, and road-exercise instructions, as the legitimate way to act. Frequently referencing the statement "according to the Act,", they routinely spoke through the system when directing units or justifying decisions, ergo, this managerial discourse positioned the UTurn as a figure of authority. The quote from a senior manager below reemphasizes this concept:

> *"*In a very quick way, that we had no choice but to conform, because it is now legislated. It didn't give us that breathing space to say, well, we had to take a long time to transition, because once the system... and this is the strength I believe and I will say that really drives this UTurn system, it is because the core of the UTurn is the law. It is not arbitrary policy; it is the law. Therefore, because it is the law, management had to make quick decisions,

> even down to financing the programme, because it is law, to implement the law. So, we repealed the old and implemented the law and then built the management system for it" (Management Interview #1).

This account illustrates how management ventriloquized the law to legitimize rapid organizational transformation. By positioning the UTurn as an unavoidable enactment of legislation rather than a discretionary managerial choice, authority was displaced from individual decision-makers to a sociomaterial configuration in which law, technology, and organizational workflows jointly compel action. This shows that the implementation of the UTurn was not merely a response to administrative inefficiency, but a reconstitution of how legality, authority, and accountability are enacted in public-sector practice.

6.1.1 Emerging Organizational Practices from the Implementation of the UTurn

In the context of RQ1, the UTurn's effects are best understood as management-assembled configurations where heterogeneous elements, legislations, technology, organizational policy and organizational stakeholders, are amalgamated to produce new organizational practices. This is consistent with Callon & Law (2005) & Nicolini (2012) position on agencement, where agency of discrete artefacts in the process assemble to contribute to new ways of doing in the organization. These new practices do not reflect a mere digitization of a previously existing practice, rather they reconfigured what counts as ethical, transparent, and legally compliant action in the Transport Division. As Johnson & Verdicchio (2025) emphasize, values and technological functions do not exist independently; they are co-produced in practice, generating new meanings and new interpretations of what counts as appropriate action. Management accomplished this by (i) standardizing processes across the entire organization, (ii) reconfiguring and streamlining interagency processes (e.g. Judiciary & TECU), (iii) embedding accountability

into all the process through the creation of audit trails and (iv) the alignment of organizational processes in accordance with the MVRT Act.

From a practice-based and sociomaterial perspective, these configurations demonstrate how organizational practices emerge through the alignment of legal texts, technological artefacts, and managerial action rather than through technology alone. In ANT terms, authority is produced as an effect of associations among the Act, the UTurn system, and organizational routines, rather than residing in any single actor. This extends prior work on technology-in-practice by showing how legislation gains operational force through AI-enabled infrastructures in public organizations.

This finding of the UTurn use by the Transport Division aligns with Benhamou (2020) & Jimenez-Gomez et al. (2020) observations of the role of AI having an increasing role in public sector decision making and the potential for AI to be disruptive to existing practices. The reconfiguration of practices in the Transport Division gives credence to the idea that AI integration will force the adopting organization to reevaluate the role of technology in its core processes. With the UTurn, the use of the technology is deeply pervasive and thus the reengineering of the way things were done reflected an organization catalyzed into upheaval because of the considerable shifts in policy and process. Additionally, when considering the role that the UTurn plays as a tool in supporting decisions, that is also consistent with van Noordt & Misuraca (2020) position on the role that AI will play in the public sector. The UTurn, as asked in RQ1, not only created new practices for the various users who interface with the technology on an administrative level but also created a new department within the organization with the introduction of the Traffic Enforcement Center Unit, the unit that manages the UTurn as a direct result of the implementation of the system.

Where this study on the UTurn adds to the discourse is in placing public sector AI as a materialization of the law. Giving agency to the law through the technology, moves the discussion from the generally agreed upon issues of the benefits of technology in improving efficiency, addressing corruption and improving service delivery, to actively considering the dynamic of the relationship of AI to legislation. The management of the Transport Division and other senior managers interviewed in this study were resolute in affirming the timeline of the UTurn, i.e., the legislation came first, and the technology was seen as a way to carry the amendments to the law. The UTurn supported national decision-making, reflecting the political ideology of the government of the day to decriminalize traffic offenses and introduce the demerit point system; supported organizational decision-making by management through the creation of policy that supported the use of the UTurn and the establishment of the TECU; and the technology reshaped individual decision-making through the mandated use of the UTurn for all of the core day-to-day functions.

6.1.2 The UTurn as a Sociomaterial Disruption: Redefining Authority and Redistributing Agency

The introduction of the UTurn constituted a sociomaterial disruption not because it digitized existing routines, but because it reorganized how authority and agency were enacted in practice. As workflows became guided by system prompts and legislatively mandated audit trails, legitimacy increasingly depended on what the system recorded and what the law prescribed rather than on individual judgment alone.

This reorganization is consistent with the findings of Viktorelius et al. (2021) which posit that automated systems become consequential only through the imbrication of material and human agency, where routines evolve as automation and practitioners shape each other over

time. Routine matters progress automatically within workflows that were governed by the UTurn, based on management mandates that oversaw the decision-making agency of the system. These changes in the organization redefined authority, as management sought to align processes with the amendments to the MVRT Act and redistribute agency across human and non-human actors. This shift is visible in moments where managers and officers defer to non-human authorities, invoking phrases such as “the system won’t allow” or “according to the Act” to justify action and delimit discretion.

These moments illustrate how authority is produced as an effect of sociomaterial arrangements rather than as a property of individual roles. From a sociomaterial perspective, legal texts, system interfaces, audit trails, and organizational routines co-produce what counts as legitimate action. In ANT terms, authority emerges through associations among the *Motor Vehicles and Road Traffic Act*, the UTurn, TECU, and organizational actors. Ventriloquism specifies the discursive mechanism at work: managers and officers animate the law and the system as authoritative voices that authorize, constrain, and obligate action.

While this redistribution of authority stabilizes accountability and transparency, it also constrains professional discretion and introduces new sites of tension, particularly where system outputs conflict with situational judgment or citizen claims.

6.1.2.1 UTurn as a Figure of Authority in Senior Management Discourse

In senior management discourse, the UTurn functioned as a figure of authority through which directives were legitimized and accountability was framed. Rather than issuing instructions as discretionary managerial decisions, managers consistently positioned the system and the Act as the authoritative basis for action.

As seen in the excerpt below, management was clear to couple the actions of the UTurn with the MVRT Act. The agency of the UTurn as a tool for decision-making was directly linked to what the Act permitted. The code of conduct and standard operating procedures for the department charged with oversight of the UTurn, were bounded by the law.

> "So, the Act, the *Motor Vehicles and Road Traffic Act 48:50, 9 of 2017, 15 of 2020,* those are our guiding documents. So, in the grand scheme of things, those are our standard operating procedures, but still we had to break down the processes into standard operating procedures to allow for, "This is how we do business here…Some of the policies we had to put in place were in terms of what we call the code of conduct, a specific code of conduct outside of the Ministry, because this is a code of conduct by which TECU staff is supposed to operate" (Management Interview 4).

This excerpt illustrates how legislation is treated not as an external constraint but as the organization's operational script, with the Act functioning as de facto standard operating procedures that are subsequently translated into routinized practices within TECU.

Inherent in any discourse that involves the UTurn by default speaks to the authority vested in the system by the law. So too, any system constraints as it pertains to decision-making authority are reflected in management discourse, as the law, authority and agency are all entangled.

As demonstrated in the quote below, even though the system authorized the assignment of demerit points to a driver, due process i.e., the law must still be followed. The language of management, as reflected in the interviews, showed that discussions about authority and scope of the UTurn were interwoven even into the routine decisions that used the system:

> “You will want to give people an opportunity for what we call due process, and to be given an opportunity to defend, to give us your side of the story. Because let's say a man gets four seat belt tickets, four seat belt tickets, we are talking four times four, 16 demerit points, which the system will then tell us, "This person has 16 points and is due for one year disqualification of his driving permit… This person might very well have an exemption that exempts him or her from wearing the seat belts. Why might they have an exception? Because they might be a licensed firearm holder and because of the high risk of their office, they can't be wearing a seat belt while driving. Or the person may have some sort of medical issue, where they may have, you know, some sort of chest issue or a stomach issue, or something like that, and wearing the seat belt causes some kind of restriction or encumbrance on them, and we are only able to find out that when they tell us their side of the story” (Management Interview #4).

> “Now, we don't just automatically disqualify a driver's permit just like that, because the law prescribes that we must take them through something called due process. And due process requires us to write to the person, because this is a technological system, this is the technology, the system telling us that the person has accumulated this number of demerit points, as a result of these tickets being against their driving permit record. So, the responsibility is on us now to write to them officially. This is where a manual process comes in, to then give them an opportunity to write us and tell us why their permit should not be disqualified” (Management Interview #4).

These excerpts show how authority is enacted through a layered sociomaterial arrangement in which the system and the law speak in different but coordinated voices. The UTurn speaks through automated calculations and flags, while the Act speaks procedurally

through due process requirements that constrain system outputs. Through ventriloquism, managers animate both voices in discourse, positioning decisions as neither personal nor arbitrary but as the outcome of legally bounded, system-mediated judgment. While this configuration stabilizes legitimacy and protects procedural fairness, it also narrows the space for discretionary judgment, requiring managers to continuously negotiate between system outputs, legal mandates, and situational exceptions.

A practice-based approach reinforced with a sociomaterial lens treats authority as something enacted in interaction, not possessed in the abstract (Orlikowski, 2000; Nicolini, 2012). Ventriloquism (Cooren, 2010) specifies how that enactment happens: speakers make non-human figures speak in their discourse so these figures can authorize, constrain, or oblige moves. The discourse of the management reflects Cooren's position as evidenced in the quote from the interview above "the system telling us…", demonstrating the ability of the system to advise on a decision to be made. However, in the same extract, the law is also ventriloquized when reference is made to "due process". In this situation we see the navigation and negotiation of authority and the constraints exercised on the system based on the multiple voices that assemble to determine the outcome. This is an example of a dialectic relationship that obtained in the discourse of management when addressing authority, while the system speaks to what should be done based on the system's assessment of the situation, the law also speaks to factors that needed to be considered in the decision-making process.

The ventriloquism of the different non-human figures in the decision-making process aligns with the position taken by Mišić et al. (2025), who posit that AI in good governance must balance between "good order" and "good society", in this case good order being the responsiveness of the system while good society refers to the law that should ensure fairness and

justice for citizens. This is bolstered by the work of Ghosh et al. (2025), who in the literature made reference to the adaptability of modern AI in governance and the responsibility of balancing technical advancement with ethical and social responsibility.

This study advances the argument of balance being required in public sector governance when AI is introduced and entwined in the organization's processes. There is a need to ensure that there is congruence with all the actors in the public sector decision-making so government's ethical and social responsibility to its citizens is met. Excerpts of management's discourse throughout the study reiterated the need to keep the rights of the citizens to the forefront of all decisions. In AI-mediated governance, managerial authority is not diminished but reconfigured, performed through the alignment of legal texts, technological outputs, and communicative practices that render decisions defensible across organizational and legal arenas.

6.1.2.2 TECU as a Sociomaterial Configuration of AI-Mediated Enforcement

As established previously, TECU operationalizes legally bounded automation. Cases progress through system routines until a legally significant condition triggers human review and intervention. TECU functions not merely as an administrative unit but as the organizational site where enforcement authority and legitimacy are materially produced, stabilized, and rendered accountable. Prior to the UTurn, enforcement authority was exercised largely through individual officer discretion and fragmented enforcement practices.

The excerpt below identifies how the TECU was as a direct result of the implementation of the UTurn system, which is in turn a materialization of the law and the Figure 39 shows the process that created the TECU.

> "I think the Traffic Enforcement Center, which is the unit that really manages the operations and that leans the most on the use of the technology, it is the first of its kind in

the Caribbean, so there is no other Traffic Enforcement Center, and the work of the Traffic Enforcement Center really comes out of the UTurn system" (Management Interview #2).

This formulation exemplifies ventriloquism, as management animates the UTurn as the authoritative source of TECU's mandate, positioning enforcement legitimacy as flowing from the system's legally grounded outputs. This form of ventriloquism is reproduced in everyday TECU practices when staff justify enforcement actions by invoking system determinations (e.g., "the system flagged," "the Act requires"), further stabilizing the UTurn as an authoritative actor in routine decision-making.

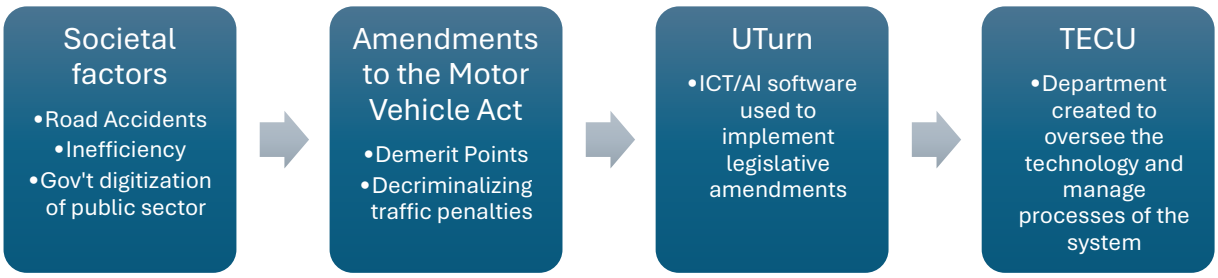

Figure 39. *Factors That Led to the Creation of the Traffic Enforcement Center Unit*

From a sociomaterial standpoint (Orlikowski & Scott, 2008), TECU is a configuration, an amalgamation of technology, legislation, departmental policy and individual staff roles (demerit points officer, red light officer etc.) TECU materializes the principle of legally mandated automation: automation runs until the system detects a condition that legally requires human judgment, at which point the system summons TECU staff to act and intervene.

Neumann et al. (2024) discuss how TOE factors (Technological, Organizational and Environmental) impact on the implementation of technology in public organizations based on their level of AI maturity. The configuration and operation of the TECU suggests that despite the technological leap that the Transport Division took in implementing the UTurn, the organization may have been demonstrating medium AI maturity. The UTurn fuses communication and automation, so while it may not be, for example, a fully autonomous recommender system, the UTurn makes recommendations to the TECU staff. From a technological standpoint, the UTurn, as managed by the TECU, reflects an advanced approach to the implementation of AI.

Public organizations have organizational and legislative constraints that prevent them from deferring all decision-making to AI, however, the reconfiguration of the policies to facilitate the technology acting as an equal contributor to the decision-making, especially in the TECU who oversees and manages these decisions, can be seen as evidence of a sociomaterial configuration; the TECU is the materialization of the law, policy, technology and human actors. This mirrors Viktorelius et al. (2021) study, who show that automated systems become embedded through iterative imbrication with organizational routines, producing new configurations of work that cannot be separated into technical and social components. The creation and existence of the TECU as department designed to oversee the transparency and the upholding of the legislation, also supports the position of Neumann et al. In essence, it is in appreciating that the Unit is evidence of a relatively mature AI adopting organization, that it is clearer to see how it is also evidence of a sociomaterial configuration of enforcement.

With the TECU being the first and potentially only one of its kind in the region, it serves as a model for the ways in which AI integration can be managed in public organizations. The challenges between using technology as a vehicle for enforcement of the law, is one that is a new

space for many countries in the Global South and certainly for countries in the Caribbean. Where governments and countries in the global south are primarily adopters of AI technology, the sociomaterial constraints about how to materialize the goals of enforcement and marry the law and technology will become increasingly pertinent.

6.2 Reconfiguring Decision-Making and Organizational Dynamics Through Sociomaterial and Legal Assemblages

The implementation of the UTurn did not merely digitize existing procedures; it reassembled decision-making into a legally framed sociomaterial configuration, here, sociomaterial configuration refers to the way decisions are produced through the coordinated alignment of legal rules, system outputs, material artefacts, and human judgment, rather than by any single actor or technology alone.

Adherence to the MVRT Act, time-stamped audit trails standardized how choices were made, made those choices traceable, and channeled them into data-driven inputs for decisions. In this configuration, audit trails, system validations, and dashboards do not merely record decisions; they actively delimit what actions are permissible, defensible, and legitimate by embedding legal thresholds directly into everyday workflows. Decisions were enacted through what can be shown to align with the Act, pass validation, and withstand legal scrutiny. The space for human discretion persists, however it is documented through the system, as reasons and evidence embedded within the workflow, rather than subject to personal judgments that are undocumented and unable to be verified.

For example, officers frequently justify enforcement decisions by invoking system prompts or legal scripts phrases such as “according to the system” or “the law says” thereby positioning authority as external, obligatory, and system-enforced rather than personal. This

dynamic is visible, for example, when a system-generated disqualification triggers TECU review, prompts inter-agency verification, and is temporarily paused pending legal clarification, illustrating how decisions emerge through coordination rather than instant automation.

These shifts also reconfigured organizational structures and roles, with TECU as a lynchpin between automation and legality, decisions travel across a new actor-network: TECU ↔ Judiciary ↔ TTPS ↔ Transport Division, altering institutional boundaries, temporalities, and spatiality. These reconfigurations also generated organizational tensions, particularly around balancing automation with discretion, managing contested cases, and adapting professional judgment to system-mediated workflows. In short, the UTurn operates as a sociotechnical assemblage that recasts governance, legitimacy, and accountability across the Transport Division and its partners.

The subsections that follow examine how these distributed, legally bounded decision-making dynamics are enacted, negotiated, and occasionally contested across organizational and inter-organizational settings.

6.2.1 Decision-Making Practices as Distributed & Legally Bounded: Considering the Sociomateriality of the Automated Decision-Making

With the UTurn, decision-making becomes a distributed and legally bounded accomplishment, enacted through the coordinated use of system validations, audit trails, and organizational roles rather than through individual discretion alone. Accountability is thus redistributed across people and artefacts, what counts as a defensible decision is what the record can show to align with the Act. The interview and observation below support this position:

> Discussion revolved around the wide functionality of the system and the contribution of human error to some of the issues being faced. Additionally, as identified by the head of the department in his interview, the system is constrained in large part by what the law of the land says, ergo, while some things can be system generated, there is need for the creation of physical files to ensure that public service requirements are met. So, a large part of the job is also creating files and sending out notification via the postal company because the law mandates that there must be notification before action can be taken and this must be done in writing (email can work for those who respond to emails) (Field Notes Summary from TECU Observation 1).

> "It is just a matter of us monitoring and ensuring that things fall off when they are supposed to fall off; things are added when they are supposed to be added, not necessarily me having to go to look for (name redacted) record and add four points because she had a seat belt ticket. I think that is one of the things that we envisioned that we said, "Okay, cool, we could get the software to do all of this and more," and then it is less computer-aided, and we focus more on how the technology could work for us" (TECU Interview 1).

From a sociomaterial perspective, decision-making here is enacted through the configuration of artefacts, legal mandates, and organizational roles that jointly determine when judgment can occur. In ANT terms, authority is produced through the circulation of cases across an actor-network that includes system routines, TECU analysts, documentation practices, and legal oversight. Decisions thus emerge as effects of alignment across this network rather than as isolated choices by individual actors. At the same time, this configuration introduces frictions,

including delays, coordination burdens, and moments of uncertainty when system signals and legal procedures do not align seamlessly.

This episode illustrates how decision-making is neither automated nor purely discretionary but unfolds through a sociomaterial configuration in which system outputs signal eligibility for action while legal requirements determine when and how action can proceed. The system identifies conditions (e.g., accumulated points), but the law obliges additional documentation, notification, and delay, redistributing agency across software, legal texts, and staff practices.

A sociomaterial lens treats decisions not as outputs of isolated incidents but as effects of entangled practices (Orlikowski, 2000, 2007; Orlikowski & Yates, 2006; S. Scott & Orlikowski, 2022; S. V. Scott & Orlikowski, 2025). The system is a structure of use: its validation rules, audit logs, and role permissions simultaneously enable (e.g., capture evidence, document reasons, escalate) and constrain (e.g., no legitimization without legislative alignment) what actors can credibly do. The UTurn does not decide in place of humans rather it indicates the conditions under which deciding can occur and be justified. This reflects Johnson & Verdicchio (2025) argument that AI systems shape decision-making not by embedding fixed values but by co-producing the meaning, legitimacy, and boundaries of action as they interact with institutional rules and human interpretation.

Abbas & Aftab (2019) in their assessment of the Pakistani government's adoption of AI, made the statement that "AI enforcement could only be done if rules and regulations to operate it are regularized." (p.551) The establishment of the TECU underscores the idea that for AI implementation to be successful, there must be an amalgamation of all the elements required for effective and enforceable decision-making, and that process must be regularized. The infusion of

the laws into the operations of the department conjoint with the use of the technology as a core element of the TECU's practices, aligns with Abbas and Aftab's conclusion.

The research showed that under the oversight of the TECU, decisions become standardized, traceable, and audit-ready through a recurrent sequence that was guided by the MVRT. The documentation of the alleged infraction is captured (video or picture evidence), a reason is given for why the ticket is being issued (verbal notification as well as documented on the tickets) and then there is review for consistency and follow-up (especially in cases where the ticket is contested). What used to be individual discretionary judgment lacking oversight must now be documented; Transport Officers and TECU analysts still exercise judgment, but they do so by attaching evidence and documenting the violations that are subsequently available to supervisors, citizens, and courts. Managing exceptions to the standardized process is likewise routinized; TECU pauses automation when legal or evidentiary thresholds aren't met, records a rationale, and then releases or returns the case, making the locus of judgment visible and reviewable across agencies.

Theoretically, the analysis concretizes technology-in-practice for traffic enforcement, the system frames the decisions to be made, yielding automation to human final execution. Sociomaterial clarifies how legal categories are embedded into the rules that form the foundation of the UTurn. This model of implementation and governance provides replicable blueprint for agencies seeking transparency and accountability while preserving professional judgment.

Empirically, this analysis shows how AI-mediated decision-making in public organizations operates as a legally bounded sociomaterial configuration that redistributes authority across artefacts, actors, and institutions while preserving human judgment within documented constraints.

6.2.2 The Creation of New Networks and the Reconfiguration of Organizational Dynamics

The implementation of the UTurn reconfigured organizational dynamics by assembling new inter-organizational networks through which decisions now circulate. Rather than residing within a single institution, authority and responsibility are enacted across TECU, the Judiciary, the TTPS, and the Transport Division as cases move, pause, and are resolved. The UTurn restructured interorganizational dynamics by assembling new actor-networks (Latour, 2005). This networked dynamic is evident when a system-generated case initiated by the Transport Officers is reviewed by TECU, verified through records, and subsequently adjudicated by the Judiciary, with each step leaving documentary traces that shape subsequent action.

From an ANT perspective, decision-making here is enacted through an actor-network in which authority emerges through associations rather than hierarchical command. Sociomaterially, this network is stabilized by shared artefacts, system records, audit trails, and legal documentation, that allow decisions to travel across institutional boundaries while retaining legitimacy. Organizational dynamics are thus reconfigured as coordination work, where legitimacy depends on alignment across actors and artefacts rather than on institutional location alone.

These networked arrangements redefined institutional roles, shifting portions of administration from the judicial system to the UTurn and allowing the court to refocus on enforcement. The UTurn also introduced new temporal and spatial configurations of work and operates as an assemblage that reconfigures governance, legitimacy, and accountability at the inter and intra organizational level, as evidenced in the statements below:

> "I think one of the really successful things about the UTurn system is the connectivity it creates across Government. So, the UTurn system has connected Licensing Division, the

> Judiciary, TTPS and TTPost. And it feeds information and makes it much easier for traffic matters and licensing matters and the ticketing system to work" (Management Interview #2).

This account above illustrates how the UTurn does not simply connect organizations technically but reorganizes how authority and responsibility are distributed across them, enabling decisions to be enacted collaboratively rather than sequentially. The quote below references the realignment of operations to be consistent with the organization's core mandate.

> "…actually it (the courts) is returning to what it should be. Well, the court should never have been dealing with all these other things. How did that ever enter into the court system? Of course, I will not be able to answer that part. But that is not the business of courts. Why is the court taking money for a traffic ticket when it is not a crime?" (Management Interview #3).

Analytically, the above quote reflects a reallocation of jurisdictional authority, where administrative decision-making is redistributed to system-mediated processes while judicial authority is preserved for contested and exceptional cases.

van Noordt & Misuraca (2020), posited that eGovernance maturity is a necessary platform to aid in the incorporation of AI into government processes. They further stated "adoption of AI within the government requires an innovative mind-set within the public sector. This aspect is highly related to existing practices of adopting and developing new innovations within public service delivery" p.11. With the introduction of the UTurn, what was noted is the creation of new and more seamless information pathways between complementary organizations, consistent with the idea advanced by van Noordt & Misuraca.

While there was an understanding that communication and data had to be transmitted between these organizations, the introduction of the UTurn created a platform that formalized these arrangements, facilitating communication back and forth in real-time. Additionally, it reconstituted the processes within both the Transport Division, as evidenced by the creation of the TECU and new organizational policy, and the Judiciary, who were able to revert to their core business of managing justice and removing administrative and fiduciary duties from the courts.

The UTurn not only reconfigured practices between the organizations but it also created temporal shifts in the customer facing process of the organization, which allowed officers working in the field to be more flexible in their road operations. Transport Officers were able to get support from the TECU and the UTurn field officer, who functions as an extension of the TECU through a mobile office. This mobile office marked the creation of a brand-new process that had not existed previously in any iteration. The authority of the TECU, the UTurn and the law is thus manifest through this process of a field officer, unbounded by time and geography. These changes reconfigure organizational dynamics by decoupling decision-making from fixed locations and schedules, while simultaneously increasing coordination demands across roles and institutions to maintain continuity. While these networked arrangements enhanced efficiency and responsiveness, they also introduced new frictions related to coordination, role clarity, and accountability as decisions traverse multiple organizational sites.

This study not only highlighted the importance of having a proper infrastructure to support the implementation of AI in governance but also highlighted the possibilities that can be achieved with the implementation of AI systems. The possibilities of procedural and processual reengineering are attainable once there is a maturity in governance that allows for innovation and cohesion between the technology, policy and human stakeholders. Empirically, this section

shows how AI-mediated governance reshapes organizational dynamics by producing inter-organizational sociomaterial networks in which authority, legitimacy, and accountability are enacted through coordinated movement rather than institutional containment.

6.3 Working with the UTurn: From Tensions & Delegation of Authority to Reconfigured Roles

While previous sections examined how authority and decision-making are reconfigured through sociomaterial arrangements, this section shifts attention to how these configurations are enacted, negotiated, and sometimes contested in real-time interaction. In everyday encounters between officers, motorists, and the UTurn system, authority is not simply applied but performed through communication, documentation, and reference to non-human actors.

At this interactional level, sociomaterial configurations took shape as officers navigated system prompts, legal obligations, and public responses simultaneously, producing moments where authority must be justified, deferred, or defended through reference to "what the system requires" or "what the law allows." These interactions are characterized by ventriloquism, as officers animate the law and the UTurn system as authoritative voices to legitimize action, manage conflict, and clarify personal discretion in situations marked by uncertainty or resistance. Through this redistribution, enforcement legitimacy is no longer grounded primarily in individual discretion but is produced through sociomaterial alignment between system prompts, legal codes, communicative practices, and real-time interaction with the public.

At the same time, these encounters revealed the affective and relational dimensions of AI-mediated governance, including discomfort, suspicion, frustration, and accusations of overreach, as organizational authority became more visible and traceable to those subject to it.

Ergo, these encounters generated tensions that reshaped roles and competencies and employees learnt when and how to delegate authority to the system while retaining responsibility for interpretation, explanation, and exceptions. These tensions include accusations of excessive surveillance during address verification, resistance to perceived loss of driver discretion, and emotional reactions to the increased visibility of enforcement data. Competence in Transport Officers shifted toward legal-technical literacy, mediation, and communicative strategies that legitimized decisions made in real time with the public. Through the lens of sociomateriality, agencement, and ventriloquism, the UTurn emerges not only as infrastructure but as a relational actor that participates in redistributing authority and transforming public interactions.

This demonstrates that AI-mediated enforcement redistributes authority across human and non-human actors, reconfiguring frontline roles toward legal-technical mediation and communicative competence. Legitimacy is enacted in real time through sociomaterial practices that align system prompts, legal codes, artefacts, and interaction. At the same time, persistent tensions emerge around discretion, contested cases, and citizen adaptation to increased visibility and traceability.

The sections that follow examine how frontline actors negotiate discretion, legitimacy, and accountability within these interactions, highlighting both the stabilizing and destabilizing effects of AI-mediated enforcement in practice.

6.3.1 The UTurn as a Relational Actor in Daily Decision-making

At the frontline, the authority of the UTurn is encountered most directly in officer–public interactions, where system prompts, legal requirements, and situational judgment must be negotiated in real time. Decisions enacted by Transport Officers are documented episodes

performed with handheld devices that connect to the UTurn portal (Figure 40). In interaction with motorists, Officers speak through the system and the legislation to enact authority and perform legitimacy in real time. In short, the UTurn is not external to work, or a tool to be put down when deemed inconvenient or irrelevant, rather, it is woven into practice as a relational actor that co-constructs what counts as enforceable action.

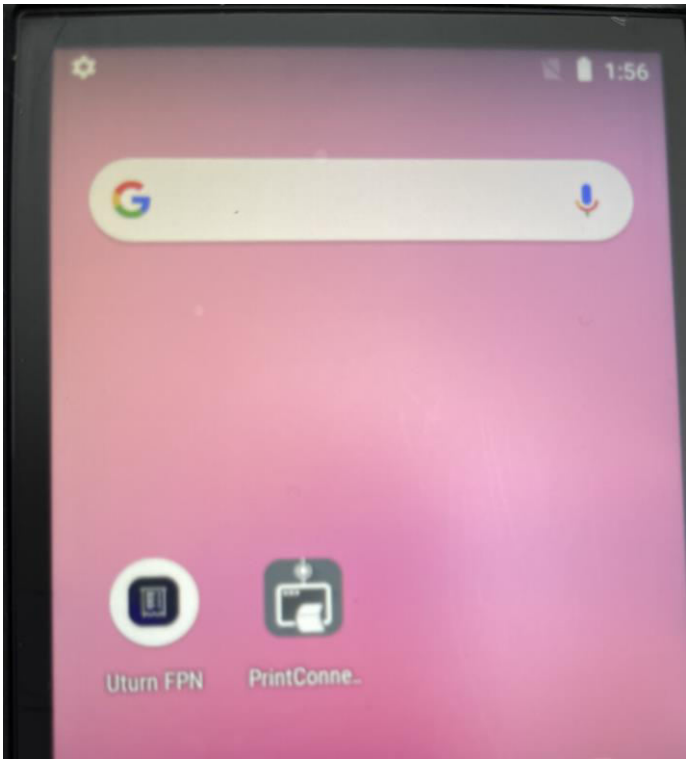

Figure 40. *The 2 Primary Apps on the Handheld Device (UTurn & Print)*

In the following excerpt, the Officer highlights a scenario that illustrates how various elements come together in real-time:

> Liaising with TECU, in terms of on-the-road operations, you might meet some people and when you check, they have points, but they will tell you, "I have been served already. I have 14 days in which to..." "All right. Cool, no problem, but let me confirm." I will call TECU office. And liaise with them to confirm whether this person with this driver's

> license number so, so, so, so, "I just want to confirm that they were ever served or what," and they will treat with it. They will call me back, "(redacted) hear what is going on. That person has been served. You could release him because..." (UTurn Field Officer, Ethnographic Interview #1)

This interaction shows how system-enabled verification practices transform routine administrative checks into moments of perceived surveillance. While officers frame address verification as a compliance requirement produced by the UTurn and the Act, members of the public interpret the same practice as an intrusion into private life, revealing a disconnect between legal rationality and lived experience. Through ventriloquism, officers deflect personal responsibility by attributing the demand for information to the system and the law, phrases such as “I just want to confirm” or “I need to verify” function to reposition authority as external, impersonal, and obligatory. These moments can be emotionally charged, marked by frustration, suspicion, and defensiveness, as the increased visibility and traceability produced by the UTurn reconfigure how authority is felt and contested in everyday encounters.

Jarrahi et al. (2022) make the case that, “machines must better understand how humans reason and operate (AI alignment), while humans must develop a better awareness of machines’ decision-making logics (AI literacy)” p.4. Considering the Transport Officers increased reliance and constantly evolving relationship with the UTurn, it is noted that there is an amplified awareness by the users of the system about its contribution to decision making logistics which creates a desire to deepen the interaction with the system. Overall decision-making enacted by the officers better integrates outcomes from the UTurn. The creation of the mobile office is testament to the interplay between the AI and human, as they each (UTurn and users) develop

new competencies, understand each other better, the relationship becomes more inextricably entangled.

The implications of this recursive relationship have already seen the advent of a reconfiguration of spatiality and new ways of enforcing the law. It therefore stands to reason that the more the relationship with AI develops, the more policy decisions and reconstituting of organizational processes that will occur as the technology becomes more widely applied. Empirically, this demonstrates how AI-mediated enforcement reshapes frontline interactions by embedding legal authority within sociomaterial practices that officers must continuously justify and negotiate in the face of public scrutiny.

6.3.2 Using Sociomateriality (Technology-as-Practice) as a Lens

Orlikowski (2000) and Orlikowski & Scott (2008) explain why decisions carried out by the Transport Officers are co-enacted with the UTurn: system validations, system prompts, and system permissions constitute a structure of use that enables (capture evidence, record reasons, escalate) and constrains (no submit without statutory alignment) action.

Applying agencement (Callon & Law, 2005; Nicolini, 2012), devices, standard operating procedures and legal frameworks are assembled so that frontline routines are consistent, verifiable, traceable and enforceable in real world conditions. The UTurn participates in daily deciding not because it decides, but because its messages and constraints
are invoked and performed in daily practice. These moments reveal also that discretion has not disappeared but has been re-situated. Rather than deciding whether to enforce, officers now exercise judgment over how and when system outputs can be acted upon, redirecting discretion toward interpretation, escalation, and documentation.

Legitimacy in these encounters is produced through visible adherence to procedure, as officers justify decisions by demonstrating compliance with system prompts and legal requirements rather than by appealing to personal authority or experience. Through ventriloquism, officers frame contested decisions as outcomes of external mandate thereby managing resistance by shifting accountability away from themselves and onto sociomaterial authorities.

The entanglement of AI in decision making is consistent with the position taken in the literature by Seeber et al. (2020); von Krogh (2018) and Grønsund & Aanestad (2020), who in various ways posit that the increased inclusion of AI into organizational practices should be deemed more like a team member than a tool. The UTurn, as evidenced by its inclusion in multiple processes that involve sentient stakeholders in the organizations, should be considered a relational actor with its own agency and equal contributor to the decision-making process.

The study advanced the idea of the increased role that AI can play in the practices of public organizations. The UTurn serves an augmenting function (managing some of the tasks that would have traditionally been done by staff), a delegating function (Officers defer to the system for issuing tickets and data collection) and an automating function (task are managed autonomously by the UTurn with staff members making the final decision).

6.3.3 Real-time Responsiveness and Dislocated Decision-making

The use of mobile offices and field-based enforcement demonstrated the dislocation of decision-making (Grosjean & Robichaud, 2010). Decision-making was co-produced across space and time wherein Transport Officers captured evidenced; TECU analysts and supervisors reviewed the information, and citizens had the opportunity to add evidence asynchronously via the portal, all these activities occurring in real-time. This arrangement produces a form of

decision-making that is neither centralized nor sequential, but emergent, assembled through the coordination of multiple actors, artefacts, and legal requirements whose contributions are temporally displaced yet mutually dependent. While the system enabled temporal and spatial flexibility, it also reconfigured decision-making as an issue of coordination, requiring the ongoing synchronization of roles, shift times, expertise, and legal oversight.

Figure 41 along with the quote from the UTurn Officer, illustrate how decision-making authority is materially extended into the field through the alignment of mobile technologies, centralized oversight, and legal mandates, enabling frontline actors to participate in decision-making without fully localizing judgment. As one officer noted when referencing the ability to make enhanced decisions in the field, “So, with that now, I have access to the system within Licensing, apart from dealing with the TECU aspect of things. I can check the VMS system, the Vehicle Management System, to see who the vehicle registered to that you are driving” (UTurn Field Officer, Ethnographic Interview #1).

This account shows how decision-making capacity is redistributed through practice: access to multiple systems does not grant autonomous authority but situates field-based actors within a broader sociomaterial configuration where decisions remain accountable to centralized review and legal validation.

Figure 41. *Mobile Office in Use as UTurn Field Officer and Transport Officer Do Background Checks on Motorist*

Referencing the literature, Pagliari et al. (2022) support in principle what was observed with the UTurn and dislocated decision-making. They argue that AI blurs traditional boundaries of authority and facilitates the creation of new pathways, requiring new frameworks to understand the role and agency of AI in organizational practices.

Reconfiguring the role of the technology in daily practices continues to be an ongoing process, as stakeholders increase their use of system and find new ways of delegating decisions. The emergence of the mobile office therefore reflects not technological innovation alone, but an ongoing process of sociomaterial adaptation through which decision-making authority is redistributed, coordinated, and continually re-stabilized across organizational boundaries.

6.3.4 Tension and Negotiation in Practice: The UTurn System as a Figure of Authority

When public expectations meet organizational authority, one of the observed outcomes is tension: motorists contest facts, fairness, or process and officers must enforce their decisions while maintaining legitimacy. Traffic Officers routinely ventriloquize the system and the Act to

justify actions and distribute accountability (Cooren, 2010). The communication with the public typically blends (i) showing evidence of the infraction (video/picture, legislative statutes), (ii) reason-giving (why demerit points will be applied), and (iii) grounds for exceptions (alerting the motorist of their right to contest).

These tensions resulting from the interactions are not anomalies, but are constitutive of practice, revealing the fragility and contingency of sociotechnical arrangements. The system became a discursive figure, invoked to legitimize actions and deflect opposition. Johnson & Verdicchio (2025) note similar patterns in their study, showing that the perceived values or authority of AI systems are not intrinsic features but interpretations that emerge through situated discursive practices. This communicative enactment of authority is especially salient in tense interactions, where officers must balance enforcement with empathy, discretion, and legitimacy. The system is not neutral but animated in discourse, shaping how decisions are explained, contested, and accepted.

In the picture below (Figure 42), the tension resulting from and interaction with an Officer is seen. The motorist making the argument that they felt aggrieved in the interaction, does not defer to the system being the source of the tension, rather that the process of ticketing demonstrated a lack of human decency and compassion. The system, while fully integrated into the practices of the Officers, is seldom identified as a problematic actor. The tension is mitigated by the Officers by reliance on the system to capture the interaction in its entirety while ensuring that the law is applied accurately and consistently.

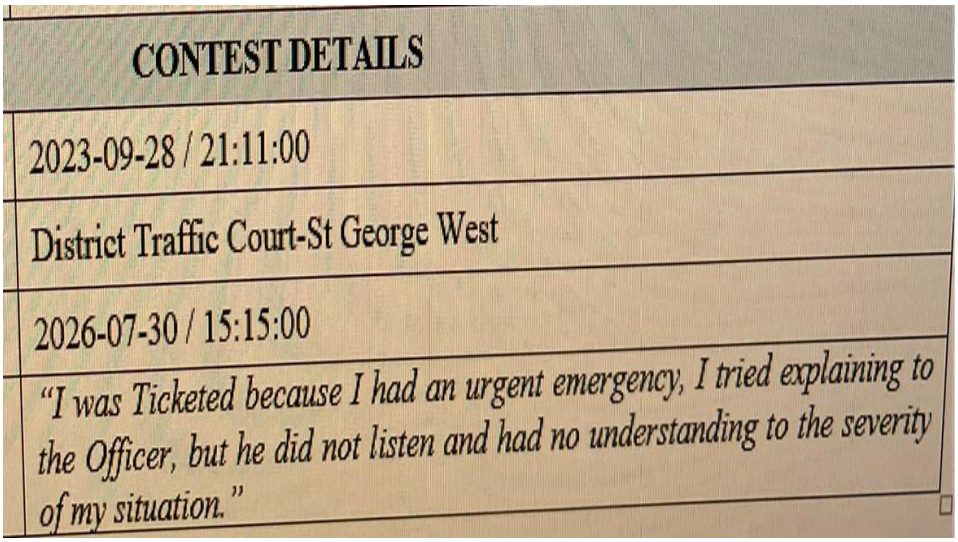

Figure 42. *Contest Details: "I Was Ticketed Because I Had an Urgent Emergency, I Tried Explaining to The Officer, but He Did Not Listen and Had No Understanding to The Severity of My Situation"*

The following quotes from the officers also show how they use the system to articulate the law, to reinforce their decisions through data and to negotiate tension that arises when there is equivocality in the interaction:

> "To be honest it makes everything easier. I could pull up whatever the charge is and then issue it accordingly" (Transport Officer, Ethnographic Interview #3 Oct 11, 2023).

> For instance, if somebody says they have a license, but they don't have it on them: "So where is your license?
> "Home."
> "Is there anybody home you could access to send a picture of it to you, that we can confirm that you have a driver's license?"
> "No."
> All right, on the system now that I have access to, I want your name, your full name, your date of birth. I pull it up on the system. If it shows up as a "not found," it is because you

were never issued a license.

And with further interrogation, people confess that, no, they were never issued" (UTurn Field Officer, Ethnographic Interview #1).

Cooren (2010) ventriloquism explains and adds clarity to the moments when people make non-human elements speak. During the research it was noted that managers and officers regularly said, "the system won't allow it," or "the Act requires…" These utterances shift the source of authority from a person's opinion to the law being manifested through the technology. In practice, this helps justify actions, close disagreements, and keep everyone, motorists and Transport Officers, oriented to the same standards.

Ventriloquism also clarifies how accountability is distributed, by saying "The system shows…" it signals reinforcement from the system being applied and "according to the Act" ties a choice to the legal framework. Transport Officers still exercise judgment, but they present that judgment as reasons to support their decisions, this allows decisions to become defensible and reviewable without claiming that the UTurn decided anything. Importantly, ventriloquism fits the study's stance, the system frames and suggests what can be done and humans enact the decision. Treating the system and the law as speaking partners avoids both extremes of human whim and tech determinism and shows how authority is performed in everyday interactions.

Kamalnath (2019) and Paschkewitz & Patt (2020) both argued that the evolving role of AI in organizations will lead to technology impacting decisions made more significantly, this was the case of the UTurn. As a figure of authority, Officers deferred to the system in instances of uncertainty or diffusion of tension. Reliance on the system as being more clinical and not subject to human discretion, allowed for Officers to say, "according to the system…". Motorists were less likely to question the system and more inclined to challenge the officer implementing

the law. This was also seen in the contest notes, nowhere in the documents observed was there a challenge to the UTurn as being errant in the decisions being provided, however, challenges were made constantly to the officers about their ability to properly interpret the violations.

6.4 The UTurn System: Reconfiguring Work Practices and Organizational Roles

The implementation of the UTurn did not just digitize tasks; it reconfigured roles within the organization. Integrating the UTurn reshaped who does what, how, and with which competencies. Customer facing roles moved from paper-based interaction to virtual interactions that saw data being updated in real time. TECU epitomized this redefinition of roles, functioning as a hybrid organizational actor that combines enforcement, coordination, and decision-support within a distributed decision-making arrangement.

One of the new roles is the driver rehabilitation function, which creates learning and compliance pathways for motorists. As a function, this did not exist prior to the amendment of the law and the creation of the UTurn system, ergo, drivers whose license have been suspended now have a legislative & practical route to regaining their license that is facilitated by members of the TECU (Figure 43). This function represents a shift in governance logic, coupling enforcement with rehabilitative and educative responsibilities within a system-mediated decision-making process. Analytically, these shifts signal a reconfiguration of decision-making work, where authority and responsibility are redistributed across roles rather than concentrated in discrete positions.

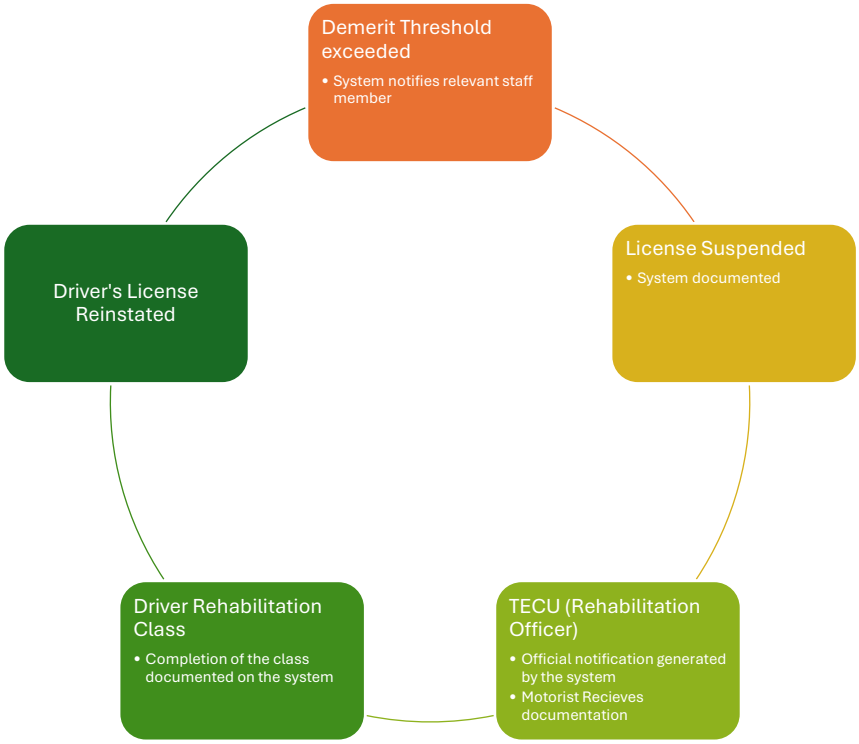

Figure 43. *Driver Rehabilitation Process. When a driver's demerit threshold is exceeded, their license is suspended and documented, a TECU Rehabilitation Officer issues official notification to the motorist, the driver completes a Rehabilitation Class, and their license is subsequently reinstated.*

Adopting a sociomaterial perspective (Orlikowski, 2007; Orlikowski & Scott, 2008), the UTurn produces agencement, in which legislative mandates, system prompts, dashboards, and departmental procedures are assembled in real time to enable organizational actors to act credibly and legally. Through ventriloquism (Cooren, 2010), staff routinely speak through the system and the Act, delegating parts of authority to the system or the law while retaining responsibility for interpretation and executing recommendations made by the system. In doing so, ventriloquism stabilizes decision-making by aligning individual action with system logic and legal authority, without displacing human responsibility.

Referencing Haesevoets et al.(2025), in their examination of implementation of AI by managerial and nonmanagerial staff in public organizations, their results showed that most staff prefer a configuration of work where AI serves in an advisory capacity. The reconfiguration of

the roles in the Transport Division bears out this concept. Legislatively, the reconfiguration of the roles still mandate that the final decision must still be managed by the staff member, however, the reliance on the advice from the system makes the process more enforceable and supports the outcomes implemented by the staff. Ergo, with the rehabilitation function, the decision to suspend and reinstate represents a new entanglement of the system and the human that allows for system to suggest and the staff member to enforce.

The system therefore facilitated the creation of a brand-new function with the UTurn providing the staff member with guidance on how to proceed, both with the suspension and reinstatement of permits, while at the same time being a reconfiguration of the overall processes of the Transport Division.

6.5 Chapter Summary

This chapter examined how employees and management in a public organization use and work with an AI-mediated system to support daily practices and decision-making processes. Drawing on the case of the UTurn, the analysis demonstrated that the system becomes consequential not as a stand-alone technology, but as part of a legally framed sociomaterial configuration in which legislation, organizational routines, and technological artefacts are enacted together in practice. Rather than simply digitizing existing processes, the UTurn materialized legislative reform into everyday work, reshaping how decisions are produced, justified, and coordinated across the Transport Division and related institutions.

Taken together, the findings summarized below demonstrate that AI-mediated governance operates through redistributed authority, legally bounded discretion, and communicatively enacted legitimacy rather than through automation alone. Table 10 summarizes the major key findings and organized by research question. The table highlights how the implementation and

use of the UTurn generated new practices, reconfigured decision-making and organizational dynamics, and reshaped how employees engage with AI-mediated systems in their daily work.

Table 10. *Summary of Findings*

Research Question	Key Finding	What the Finding Shows	Contribution
RQ1: What new practices emerge within a public organization when management implements and uses an AI-mediated system?	**Digitization as a Constraint on Informal and Corrupt Practices**	The implementation of the UTurn reduced opportunities for informal negotiation and discretionary manipulation by embedding decision-making within traceable, rule-based digital processes.	Demonstrates how AI-mediated digitization reshapes ethical conditions of work by constraining informal practices rather than relying solely on individual integrity.
RQ1	**Automation and the Removal of Administrative Bottlenecks**	Automated workflows streamlined licensing and enforcement processes, reducing delays, duplication, and reliance on manual coordination.	Shows how AI-mediated systems reorganize organizational efficiency while simultaneously increasing procedural accountability.
RQ1	**Legislation as the Foundation of Organizational Change**	Legislative reform provided the authoritative framework through which AI-mediated practices were legitimized, standardized, and enforced across the organization.	Highlights the central role of law in enabling AI-supported organizational transformation in public-sector contexts.
RQ2: In what way does the implementation and use of an AI-mediated system reconfigure decision-making practices and organizational dynamics?	**Automation, Accountability, and Auditability**	Decision-making became increasingly anchored in audit trails, system logs, and documentary evidence, rendering actions reviewable and defensible.	Reframes accountability as a sociomaterial accomplishment produced through documentation rather than personal authority.
RQ2	**AI as a Mediator of Inter-Organizational Connectivity**	The UTurn facilitated coordination and information sharing across multiple agencies, enabling decisions to be enacted through interconnected organizational networks.	Contributes to understanding how AI systems reshape organizational boundaries and inter-agency governance.
RQ2	**Redistribution of Authority Through AI-Mediated Processes**	Authority was redistributed across humans, technological artefacts, and legal frameworks, rather than centralized within individual roles or units.	Extends organizational theory by showing how AI participates in reconfiguring authority without eliminating human responsibility.
RQ3: How do employees use an AI-	**Redefining Everyday Work**	Daily work practices were reorganized around system	Demonstrates how AI-mediated systems

mediated system to support decision-making during daily work practices?	**Through Digitization**	verification, real-time data access, and standardized procedures, altering how decisions were enacted in practice.	transform frontline work without displacing human judgment.
RQ3	**Negotiating Tension in AI-Mediated Decision-Making**	Employees routinely managed tensions related to fairness, discretion, and public resistance by explaining, interpreting, and justifying system-supported decisions.	Highlights the interactional and communicative labor required to sustain legitimacy in AI-supported governance.
RQ3	**Emergence of New Roles and Functions**	The implementation of the UTurn enabled new roles and functions to emerge, reshaping how enforcement, compliance, and support were organized in practice.	Shows how AI-mediated systems actively generate new forms of work rather than merely digitizing existing ones.

Collectively, these findings move beyond existing accounts of automation by showing how AI becomes authoritative only through its embedding in law, organizational routines, and communicative practice. These findings also show that AI-supported decision-making in the public sector is best understood as a practice-based transformation rather than a hand-off to automation. Across all three of the sub-research questions, decision-making emerged as a distributed, legally bounded, and communicatively enacted accomplishment. Authority was not displaced by the system but performed through sociomaterial practices such as documentation, audit trails, system verification, and ventriloquism, whereby staff animated both the system and the Act as authoritative voices to justify action and manage contestation. Discretion was not eliminated, but repositioned as interpretation, explanation, escalation, and justification within system-mediated workflows.

In answering the overall research question of "How do employees and management in a public organization use and work with an AI-mediated system to support daily practices and decision-making?", they do so by assembling and enacting a legally bounded, sociomaterial configuration in which the system, the law, roles, and routines jointly produce decisions. In

practice, AI-supported decision-making is a practice-based transformation rather than a hand-off to automation. The system is a relational actor, it suggests permissible moves, carries the traces that justify them, and is voiced in interaction to secure legitimacy. People remain central, but their discretion appears as documented reasons, mediated by a system that coordinates multiple publics.

At the organizational level, the UTurn reconfigured boundaries, roles, and governance arrangements by linking TECU, the Transport Division, the Judiciary, and the Police Service into interconnected decision-making networks. The emergence of hybrid roles and new functions, such as driver rehabilitation, illustrated how AI-mediated systems can institutionalize new forms of governance that combine enforcement, compliance, and education. At the same time, the findings revealed persistent tensions in everyday use, particularly around fairness, empathy, and perceived rigidity, underscoring the continued need for human judgment and negotiation in AI-supported public-sector work.

In sum, this discussion demonstrates that the UTurn system operates not as a neutral technological instrument but as a sociomaterial actor that reconfigures decision-making, redistributes authority, and transforms organizational routines. By embedding legislative mandates into automated workflows, the system mediates practices of accountability and legitimacy, while simultaneously generating new tensions around discretion, fairness, and interpretive flexibility. Decision-making emerged as a distributed, situated, and communicatively enacted process, shaped by the interplay of human judgment, algorithmic outputs, and institutional norms. These findings underscore the need to conceptualize AI in public governance as a relational and performative phenomenon, rather than a purely technical solution. They also invite policymakers and organizational leaders to design governance frameworks that harmonize

technological efficiency with human oversight, cultural adaptation, and ethical accountability. This sets the stage for the concluding chapter, which synthesizes the study's contributions and outlines implications for theory, practice, and future research.

7 Conclusion

This thesis sought to answer the central research question: “How Do Employees and Management in a Public Organization Use and Work with an AI-mediated System to Support Their Daily Practices and Decision-Making Process?” This question was addressed through responding to the sub questions that examined the role of the UTurn from three critical standpoints of users and stakeholders: Senior Management who create the policy that guides the use of the UTurn; the Traffic and Enforcement Center Unit who managed the technical, procedural and overall oversight of the data that is generated by the UTurn; and the Transport Officers who are the direct liaisons between the system, the organization and the public. Using an organizational ethnography allowed for a comprehensive understanding of the integration of an AI system into the practices of the Transport Division and the ways in which multiple stakeholders reconstructed existing practices, co-constructed new practices, and continue to evolve in the use of the system as they become more proficient. Specifically, this thesis shows that AI-mediated governance in the public sector operates not through the delegation of authority to technology, but through the sociomaterial reconfiguration of legal authority, organizational practice, and communicative action, an empirical dynamic that shows promise for future examination and contribution to AI governance literature.

The thesis also demonstrated that AI-mediated governance does not operate through technical automation alone, but through sociomaterial arrangements in which legal authority, organizational practices, and communication are continuously enacted and negotiated. The research showed that AI systems become consequential not as neutral tools, but as participants in practice, structuring how decisions are made, how accountability is justified, and how authority is communicated across organizational and institutional boundaries. Rather than replacing human

judgment, the UTurn reconfigured it, embedding legislation, data, and communicative norms into everyday work. This framing positioned AI-mediated decision-making as a practice-based reordering of governance rather than a purely technical or policy intervention.

The study also highlighted the impact of the social on the material, where cultural and organizational issues contributed heavily to the materialization of the UTurn, the system that was chosen as the driver for policy and legislative reform. Throughout the study, reference was made to the MVRT Act as the foundation for organizational practices and decision-making, even with the entanglement of the technology into the daily processes. The Act continues to speak through the way Transport Officers interact with the public, how TECU manages the technology and customer interactions and how reflexive management is to information generated by the system

7.1 Contributions of the Study

The study of the UTurn in the Transport Division allowed for the development of theoretical, methodological, and practical contributions, demonstrating its relevance to both scholarly inquiry and applied governance contexts.

7.1.1 Theoretical Contribution

This study makes a significant theoretical contribution by advancing practice-based studies within the context of government organizations in Small Island Developing States. By examining the UTurn system as a sociomaterial actor, the research highlighted how AI systems are not simply tools for efficiency but active participants in the reconfiguration of work practices, decision-making, and authority structures. This extends practice-based scholarship by demonstrating how the enactment of AI in the public sector simultaneously stabilizes legal norms, redistributes agency, and redefines the meaning of accountability and legitimacy. It shows

that public-sector decision-making is not merely top-down or procedural, but a dynamic practice where human and non-human actors interact to co-produce outcomes.

7.1.2 Methodological Contribution

Methodologically, this thesis demonstrated the value of organizational ethnography for studying digital transformations in public-sector settings. By combining direct observation, interview data, and analysis of legislative implications and technological infrastructures, it offered a nuanced, practice-based account of how AI systems become embedded in everyday organizational life. The study shows that ethnographic immersion is critical for capturing the tensions, negotiations, and improvisations that characterize AI implementation, insights that may remain invisible in purely quantitative or survey-based approaches. This methodological contribution underscores ethnography's capacity to reveal the lived experience of automation and algorithmic governance.

By grounding its analysis in organizational ethnography, this study provides a rare, situated account of AI-mediated governance as it unfolds in real time. This approach reveals not only the formal structures but also the micro-level practices, conflicts, and accommodations that sustain technological change. The ethnographic lens thus remains a powerful methodology for uncovering the hidden dynamics of digital transformation.

7.1.3 Overall Contribution

This thesis contributes to theory, methodology, and practice in meaningful and original ways. Theoretically, it extends the Practice-Based Studies approach into the realm of public-sector governance, demonstrating that AI is not merely a technical instrument but a sociomaterial actor that mediates legal authority, redistributes agency, and reshapes the meaning of accountability and legitimacy. Methodologically, it advances the use of organizational

ethnography as a critical tool for examining digital transformation in context, revealing how practices evolve through negotiation, the resolution of tension, and adaptation in ways that often remain invisible to quantitative or policy-based analyses. Practically, the study offers a grounded framework for AI implementation that emphasizes the integration of human judgment with automation, and the need to balance innovation with transparency, fairness, and public trust. Collectively, these contributions position this research as a substantive step toward reimagining how governments, employees, and citizens coexist with intelligent systems in an era of algorithmic governance.

Viewed collectively, the contributions of this study reposition AI-mediated governance as a communicative and practice-based accomplishment rather than a top-down technological implementation. Theoretically, the research extends Practice-Based Studies into public-sector governance by demonstrating how AI systems function as sociomaterial actors that mediate authority, stabilize legal norms, and redistribute agency through everyday use. Methodologically, it shows how organizational ethnography is uniquely suited to capturing the lived dynamics of automation, revealing tensions, improvisations, and negotiations that remain invisible in survey-based or technical evaluations. Empirically, the study offers a rare Global South account of AI implementation in a Small Island Developing State, illustrating how legal frameworks, bureaucratic legacies, and infrastructural conditions shape digital transformation in practice. Together, these contributions advance understanding of how decision-making, accountability, and legitimacy are enacted through AI-mediated organizational life.

This research further contributes to organizational communication scholarship by demonstrating how AI-mediated systems restructure communication within and across public-sector organizations. The UTurn functioned not only as a decision-support system but as a

communicative infrastructure that standardized how information was produced, circulated, and interpreted among senior management, technical units, frontline officers, and external state agencies. Through a shared database built on the platform of an ICT system, the system facilitated intra-organizational coordination while enabling more consistent, traceable inter-organizational communication.

Importantly, these communicative processes redistributed authority, the UTurn did not merely transmit information but shaped what could be said, how it could be justified, and by whom. This finding extends sociomaterial and practice-based approaches by showing that AI-mediated communication is central to the enactment of legitimacy, accountability, and coordination in contemporary public governance.

7.2 Recommendations for Future Research

Future research should expand beyond the organizational perspective to include the public's responses to AI governance. Understanding citizen experiences, trust, and perceptions of fairness will provide a more complete picture of how these systems shape democratic accountability and legitimacy. Comparative studies across other public organizations in the Caribbean and the broader Global South could explore whether similar sociomaterial configurations emerge in different legal, cultural, and infrastructural contexts. Such research would contribute to a richer global understanding of AI governance and the ways it mediates state–citizen relations.

7.3 Recommendations for the Transport Division

Based on the findings of this in-depth analysis, it is recommended that the Transport Division prioritize initiatives that strengthen the integration of human judgment with AI-mediated decision-making. While the UTurn system successfully standardizes and automates

many aspects of traffic enforcement, its effectiveness ultimately depends on how employees interpret, use, and intervene in its outputs. Employees should be given formal platforms to contribute to the use and potential development of the UTurn that are specific to their practices. There is already evidence of innovation by staff as comfort levels rise; processes to capitalize on this innovation should be formalized by management. As such, these initiatives would not only focus on technical skills but also on reinforcing a shared understanding of the legal frameworks underpinning the UTurn and potential for increased integration of the technology. By investing in capacity-building, the Transport Division can ensure that automation enhances fairness and accountability.

A second priority is the strengthening of public transparency and citizen engagement. As the study revealed, AI systems can inadvertently generate mistrust if citizens perceive them as opaque, potentially weaponized or punitive, rather than as tools for improving road safety and the administration of justice. The Transport Division should therefore continue with its multi-channel public education strategy that explains how the UTurn operates, why it is legally mandated, and how citizens can interact with it. Special consideration should be given to mobile-friendly digital portals, potentially through the creation of a UTurn motorist app, given that many Caribbean citizens rely on smartphones as their primary means of internet access. This mobile app should allow for ticket tracking, court scheduling, payment, and access to educational resources. Additionally, continuing regular public consultations with taxi and maxi driver associations and other civil society organizations would enable the Division to continue to identify concerns early and incorporate citizen feedback into system improvements and customer service.

Finally, the Transport Division is encouraged to leverage the rich operational data generated by the UTurn for evidence-based policy making, suggestions to legislative amendments and continuous improvement. In the highly politicized environment that is consistent with Caribbean Westminster governance, the inclusion of data-driven policy could go far in moving nation building legislation beyond partisan politics. Data-sharing partnerships with other state agencies could also enable coordinated interventions and optimize resource allocation. Currently, the sharing of information between agencies varies in consistency based on the organization and the legislation that guides the transmission and use of data. The public sector can benefit from having a centralized data hub that formalizes data sharing and data protection. Importantly, this process should remain iterative and adaptive.

These recommendations aim to consolidate the gains achieved through the implementation of the UTurn, while addressing the organizational, citizen-facing, and policy-oriented dimensions of AI-mediated governance. They emphasize a balanced approach in which technology enhances human judgment, public trust is actively cultivated, and data is mobilized for long-term systemic improvement. By adopting these measures, the Transport Division can strengthen not only the operational efficiency of traffic enforcement but also the legitimacy of AI in public-sector decision-making.

7.4 Chapter Summary

As governments worldwide increasingly turn to AI to manage complexity, this research points to a future where decision-making is more automated, data-driven, and traceable, yet still deeply social and negotiated. Policymakers and practitioners must remain attentive to the ways these systems shape authority, inclusion, and citizen engagement. The findings underscore the importance of designing AI systems that support not just efficiency but also transparency,

fairness, and trust, ensuring that technological innovation strengthens rather than erodes stakeholder confidence that will be affected with the introduction and integration of AI technologies.

This study set out to explore how employees and management in a public organization use and work with an AI-driven system to support their daily practices and decision-making processes. Through an ethnographic investigation of the UTurn system in the Transport Division of Trinidad and Tobago, the research revealed that AI integration is not simply a technical upgrade but a profound organizational transformation. It alters how work is practiced, how authority is distributed, and how accountability is enacted in everyday governance. The findings demonstrate that AI-mediated decision-making emerges through the interplay of human judgment, institutional norms, legal frameworks, and technological infrastructures, each shaping the other in an ongoing process of adaptation and negotiation.

By positioning the UTurn as a sociomaterial actor, this thesis contributes to practice-based scholarship by showing that technology does not merely support public-sector work but participates in its reconfiguration. It advances understanding of how automation, data analytics, and AI based decision-support systems become interwoven with organizational routines, stabilizing legal norms while simultaneously redistributing agency among human and non-human actors. This sociomaterial lens reveals that the meaning of efficiency, fairness, and legitimacy in AI-mediated governance is never fixed but continually constructed through everyday practice.

Methodologically, the research underscores the enduring value of organizational ethnography for capturing the lived realities of digital transformation. Ethnographic immersion made visible the subtle negotiations, tensions, and improvisations that statistical or policy-level

analyses often overlook. These findings reaffirm ethnography as a proven approach for examining emerging technologies in public governance, particularly in contexts where political will intersects with the law and institutional culture.

From a practical perspective, the research highlights that successful AI implementation in government depends not only on technical competence but also on human engagement, organizational learning, and public trust. The recommendations offered, emphasizing participatory design, spaces for staff innovation, refined data governance frameworks, and citizen transparency, illustrate how sociomaterial principles can be operationalized in practice. They reinforce the idea that technology achieves legitimacy only when it is enacted through inclusive, reflective, and accountable practices.

Looking ahead, these findings open new avenues for research into how citizens experience and respond to AI-mediated governance, and how similar sociomaterial configurations emerge across different legal and cultural environments in the Global South. Expanding this inquiry beyond organizational boundaries would enrich our understanding of how AI systems mediate the relationship between the state and its citizens.

In conclusion, this thesis demonstrates that AI-mediated governance represents a practice-based reordering of decision-making in the public sector. The UTurn system exemplifies how automation can coexist with human discretion, how data can serve both control and empowerment, and how technology can both embody and challenge the values of the state. As governments worldwide deepen their reliance on AI, the findings underscore a crucial imperative: to design and manage these systems in ways that preserve fairness, transparency, and human agency. The future of public-sector decision-making will be increasingly data-driven and

automated, yet it must remain grounded in the communicative, ethical, and human dimensions that serve to reinforce democratic governance.

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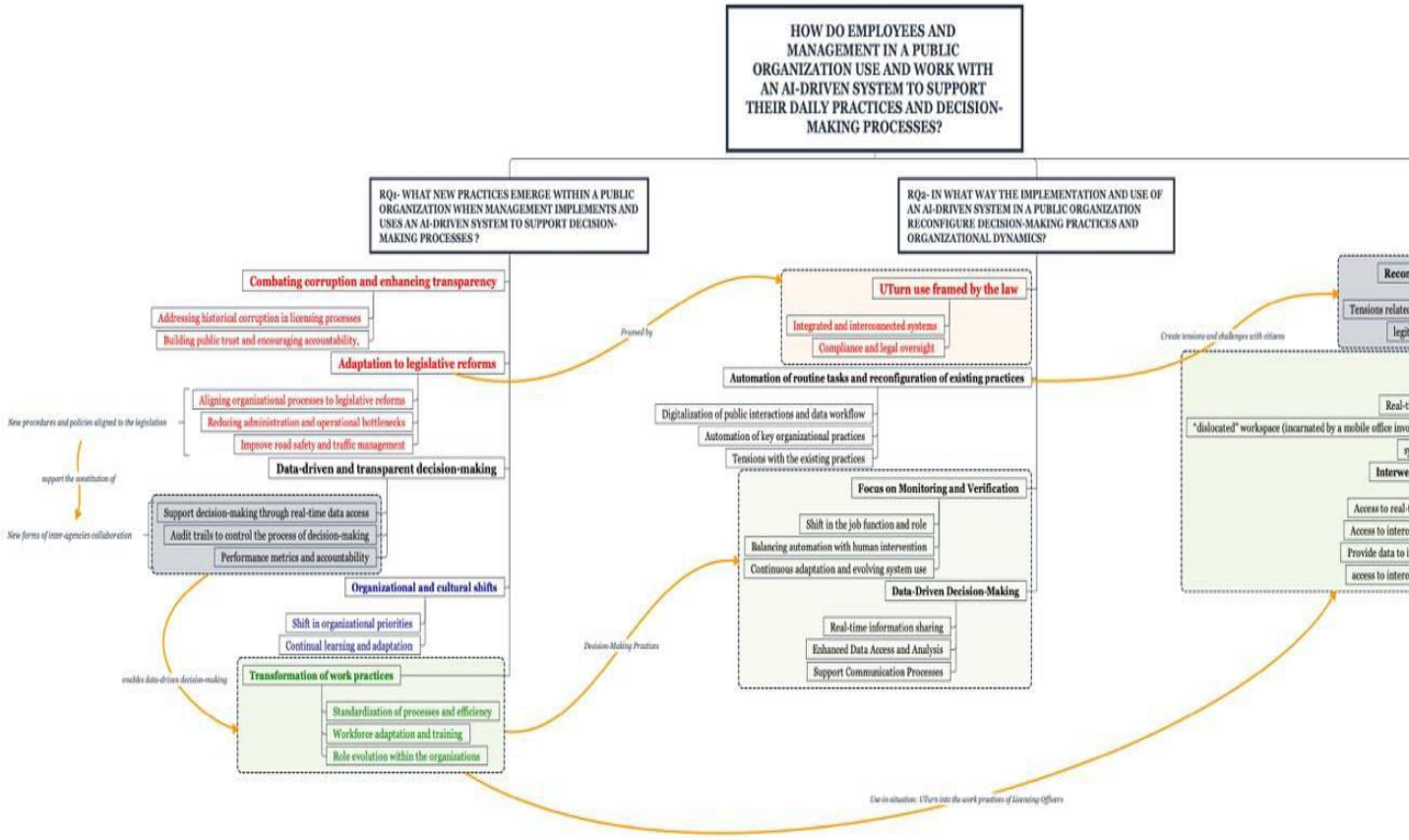
Appendix A Map of the Results



Appendix B Data Analysis (Senior Management)

MAIN THEME	SUBTHEME	QUOTES/EXAMPLES
1. Legislation as the driver for change *The amendment of the Motor Vehicle Act focuses on legislative actions and policy reforms designed to address the pressing societal issue around road safety and traffic management. Legislation is also concerned with creating more efficiency in*	**1.1. Aligning organizational processes to legislative reforms** *The various government organizations (Transport Division etc.) have adapted their processes to comply with new legislative reforms.*	"In a very quick way, that we had no choice but to conform, because it is now legislated. It didn't give us that breathing space to say, well, we had to take a long time to transition, because once the system... and this is the strength I believe and I will say that really drives this UTurn system, it is because the core of the UTurn is the law. It is not arbitrary policy; it is the law. Therefore, because it is the law, management had to make quick decisions, even down to financing the programme, because it is law, to implement the law. So, we repealed the old and implemented the law and then built the management system for it." (**Mgt. Int. 1**) "…the technology did follow legislation. What I can't tell you at this point in time is the sequence in which the legislation would have changed. What I do know is that a couple years ago, the Ministry would have identified a suite of legislation, so that would have included seat belts, then there was something for booster seats, then there was something re cell phones, and all of this falls under the Motor Vehicle and Road Traffic Act. So that is the legislation that we constantly amended over a period of time."

government and judicial services and decriminalizing traffic offenses.		(**Mgt. Int. 2**) "So, a suite of legislation would have followed, which would have allowed us to get to this point and also facilitate the introduction of the technology…the technology provided the framework that allows for the successful implementation of the projects, as a result of the legislative reform." (**Mgt. Int. 2**) "Prior to this project, the legislation allowed for the payment of traffic tickets at the court. That is a heavy overhead on the court, in a lot of ways." (**Mgt. Int. 3**) "A parking ticket is really a violation of the *Motor Vehicles and Road Traffic Act*. Joe Public comes to the Judiciary to pay for that ticket. This has nothing to do with Joe Public going before the court to argue his case. It has nothing to do with that, which is what the court is for. The court is there to adjudicate on disputes and to come up with a remedy in order to punish offenders.

		The Judiciary has to have cashiers; it has to have systems in place to accommodate this. Then, traffic tickets take up a lot of time on a magistrate's list. So, you can find 120 traffic tickets on a given day. Why are you dealing with traffic tickets, if it is not a matter in dispute?" (**Mgt. Int. 3**) "…when the legislation came in, and I do not recall the year of the legislation, the legislators looked at all the statistics, and they realized all those things that I just pointed out and the legislation was amended. In the amendment, it provided for a number of things. It changed the system, so it brought in the demerit point system, which (redacted) would have explained to you. It also looked at the role of the court, and it came to the conclusion that the court needed to concentrate on its core business. So, let's take tickets out of the system." (**Mgt. Int. 3**) "A person must only come to the court if they have a dispute, which is what is the core business of the court. So, the legislation said, "Let us bring these entities together." The Police issues the ticket; the Ministry is responsible for determining what is the outcome if you breach any of the laws; the Judiciary will deal... Okay, where are we going to deal with these

		payments? Take that out of the court system and let the Judiciary deal with its core business, which is adjudicating disputes." (**Mgt. Int. 3**) "One of the things we look at here at the Judiciary is: Technology must not dictate to us what is our process. Our process dictates the technology." (**Mgt. Int. 3**) "Well, it has allowed the court to refocus. I mean, I will leave you to figure this part out. To me, it was driven by the legislation. The legislation refocused the court to where it should be, which is dealing with disputes, and then the solution that was used, "Let us see how we can get technology that can help us to get to where we ought to be." (**Mgt. Int. 3**) "Because I could tell you, before the legislation even reached to where it was, there was a meeting with the current -- he wasn't in that position at the time -- the current Minister of Public Utilities, Marvin Gonzales. He was the Senior Legal Officer at the Ministry of Works and Transport, and I was at the meeting when he came to present to the Chief Justice this idea,

		and the Chief Justice was just too happy. He said, "You know how many years I am saying we shouldn't be doing this?" He was really elated and, well, everything started from there. I do not think there was anybody... no, there was nobody who...Even the Chief Magistrate at the time, she was on board. We started looking at how you would deal with the tickets that were already in the system; if we could give people a discount so that they could come in and finish them as quickly as possible; everybody started working assiduously. Yes, we were all on board." (**Mgt. Int. 3**) So, when called we made those legislative amendments called Act 9 of 2017, it also decriminalized a number of traffic offences -- removed that criminal element from it. The other challenge we had that caused us to go this way was that of access to paying the tickets. So persons only could have paid their tickets at courts, and of course, when you go to a court to pay your ticket, you are in a line there with persons who are coming to pay maintenance payments; to pay all the court fines; pay court fees and all these different things, and sometimes you just keep on getting danced around and delayed, and that kind of thing. So, we said, "You know what, let's streamline it, one hub and that was TTPost, that you can pay those traffic fines.

		So, what we have now is ease of business with regard to payments. We have ease in terms of persons actually having their matters heard, if they contest them. (**Mgt. Int. 4**) "So, the Act, the *Motor Vehicles and Road Traffic Act 48:50, 9 of 2017, 15 of 2020*, those are our guiding documents. So, in the grand scheme of things, those are our standard operating procedures, but still we had to break down the processes into standard operating procedures to allow for, "This is how we do business here." Some of the policies we had to put in place were in terms of what we call the code of conduct, a specific code of conduct outside of the Ministry, because this is a code of conduct by which TECU staff is supposed to operate." (**Mgt. Int. 4**) "There are policies as it relates to what constitutes an invalid fixed penalty notice. So, an officer just cannot write to us and say they made an error in terms of the issuance. It has to form part of the policy, or somewhere within the policy has to form part or one of those reasons as to why the FPN must be voided.

		So that is just about two lines. So, the standard operating procedure are some of the policies related to code of conduct; related to how the agencies interact with us. We also have Memoranda of Understanding with TTPost, with the Judiciary, with law enforcement agencies, in terms of how the communication must go, and we have put certain standards in place in terms of that as well." (**Mgt. Int. 4**) "The Traffic Enforcement Centre, one of our heaviest responsibilities here is that if somebody does not pay a ticket within their 30-day time frame and that ticket remains unpaid on the 31st day, we have a responsibility on the 31st day to write to that person officially and advise them that, based on our records, based on what the system tells us, you were issued a ticket on X, Y, Z date, which was due for payment. However, we didn't see any payment on the Record of Contest, and we ask you to give us your representations in writing as to why you did not pay the ticket. You have a responsibility, according to Section 88(a) of the Act, to do that." (**Mgt. Int. 4**) "There were always standing orders, but they never amended those standing orders to accommodate the electronic side of things, and the same thing for the Judiciary. I think what

		they haven't settled on yet, and if they did, well then, they may not have communicated that to me yet, is that they haven't settled their court rules, because they have court rules which govern how they operate. They may not have settled their court rules to allow for that electronic-to-electronic conversation, as opposed to a person-to-person conversation when it comes to these matters before the Judiciary." (**Mgt. Int. 4**) "So if we are to take the approach on disqualifying somebody just because the system tells us that they have 89 points, and not take that person through due process, and that person, John Brown, is really supposed to be Jane Brown, we could find ourselves in a whole legal battle that we could never win. So, we must take that person through due process. There are ways and means now we are using to find those persons, so we have a legal position now on finding those persons through newspaper advertisements, similar to what banks use, in terms of finding the whereabouts of" (**Mgt. Int. 4**) "We make it very legal. We say, "You have an outstanding matter with the Traffic Enforcement Centre Unit, and you are asked to contact us so we could address your matter."

		We are very straightforward like that, because we have a responsibility under the law of that due process." (**Mgt. Int. 4**) "You will want to give people an opportunity for what we call due process, and to be given an opportunity to defend, to give us your side of the story. Because let's say a man gets four seat belt tickets, four seat belt tickets, we are talking four times four, 16 demerit points, which the system will then tell us, "This person has 16 points and is due for one year disqualification of his driving permit." This person might very well have an exemption that exempts him or her from wearing the seat belts. Why might they have an exception? Because they might be a licensed firearm holder and because of the high risk of their office, they can't be wearing a seat belt while driving. Or the person may have some sort of medical issue, where they may have, you know, some sort of chest issue or a stomach issue, or something like that, and wearing the seat belt causes some kind of restriction or encumbrance on them, and we are only able to find out that when they tell us their side of the story." (**Mgt. Int. 4)**

	1.2. Improve road safety and traffic management *The UTurn is intended to be the tool to ensure the reduction of negative road incidents.*	"It is really a system that deals with the management of the issuance on tickets for offences. It is also intended to deal with red light offences, as well as to put a management system to ensure that we change behaviour within the country as far as driving and carnage on the nation's roads, etc." (**Mgt. Int 1**) "…it is really a system that is built with the context for managing offenders who continue to break the nation's laws when it comes to the use of motor vehicles. What we have found over the years is that persons were basically finding ways in which they could simply pay for their traffic offences, but not change, behaviour" (**Mgt. Int 1**) "Because the UTurn system, as I said, was introduced for the introduction of the demerit point system. The objective of the demerit point system was to create safer roads, so, therefore, the success of this project will be really dependent on the figures for traffic accidents, the type of traffic accidents. It should be linked to a reduction in certain offences, for example, like wearing your seat belt, driving under the influence of alcohol. If I see changes in figures like that, then I could say it is successful. And then, I think, measurement of the success of the system will also reflect in the number of operations, in terms of the number of transactions that we are able to do."

		(**Mgt. Int. 2**) "You know, one of the things I missed when I told you two or three things earlier on, we also introduced a system against the backdrop of a very high road fatality rate…road fatality and road traffic accident rate. In fact, when we introduced the system in 2020, 2020 and 2021 saw the biggest reduction in road traffic accidents since 1956, and it was something that the Government was able to boast about from that perspective." (**Mgt. Int. 4**) "From the time they receive the letter from us, they go, and they pay. In other instances, where persons reply to those letters, they are basically asking for more time to pay, because they may be in a financial bind. For whatever reason, they may be just asking for more time to pay the ticket. But further to that -- so we are moving past when the person now says, "I need more time to pay" -- in a lot of instances, we give them the additional time to pay, but we tell them as well if they don't pay within a particular time frame, administrative sanctions can be imposed against you or the owner or the vehicle used in the commission of the traffic violation. This is coming out of the same Act."

		(**Mgt. Int. 4**)
	1.3. Reducing administration and operational bottlenecks *The introduction of the legislation that guides the UTurn and the implementation of the UTurn system is meant to make the organizations that use it more efficient in the execution of daily tasks.*	"…we had to introduce a system in which we could, one, change behavior, and at the same time not create a situation where we could crowd our nation's prisons, and I need to say that with UTurn, because the traditional system was one where if you don't pay your fine for a ticket, a police officer could have come and arrested you and take you to prison and you would have found yourself being imprisoned with someone who might have committed heinous crimes for a simple traffic offence." **(Mgt. Int 1**) "The new fixed penalty system brings with it more administrative and punitive measures into the picture, whereby if you don't pay your ticket, what is now administered upon you is either sanctions, where we freeze all your records with the Licensing Department and you cannot conduct any transactions with the Licensing Department, or you are disqualified if you reach to the point of several demerit points. So basically, it builds into a management system in a new way of applying punitive measures for ticketable offences." **(Mgt. Int 1)**

		"And when we go back to statistics, when we compare, a police officer or a Transport Officer may have taken close to about seven to eight minutes to issue a ticket, because of the old paper system. You have to write, you have to print carbon pages, etc. With the UTurn system, a fixed penalty ticket is issued in less than two minutes." (**Mgt. Int. 1**) "…on the flip side, people saw efficiency in some areas, because things started to move faster. So, for example, if you got a ticket, you could go to TTPost and pay your ticket at whatever location that you want; they could pull up your records. You don't have to go and stand up in long lines. I think before you had to go to the courts to pay your ticket and that used to be a lengthy process. It removed that entire lengthy process, which also created a backlog for years, with people who don't want to pay their tickets." (**Mgt. Int. 2**) "…if you talk to the TTPS and you talk to the Judiciary, they will also tell you about how the system was able to reduce a backlog. I can't speak to that. I can speak to the operation of the system and how it was quicker for people to get things done.

		Then, if you want to contest a traffic ticket, it was as easy as going on a website, contesting your traffic ticket, getting a date and then you go to court and you deal with it." (**Mgt. Int. 2**) "So, on one hand, while people saw — not the UTurn system — while people saw the project of introducing a demerit point system as being punitive, the use of technology made it much easier and streamlined certain operations, which made the process more efficient and less time you spend trying to do like pay a traffic ticket." (**Mgt. Int. 2**) "…some of the key indicators to me, one, will be the overall efficiency, in terms of the operations of the Licensing Division, which have been documented internally and externally, and we could provide you with samples of persons writing into the Ministry congratulating the Ministry. There were a couple letters to the editor, I think, where people spoke highly about the improvements in operations and their experiences in the Licensing Division." (**Mgt. Int. 2**) "…actually it (the courts) is returning to what it should be.

		Well, the court should never have been dealing with all these other things. How did that ever enter into the court system? Of course, I will not be able to answer that part. But that is not the business of courts. Why is the court taking money for a traffic ticket when it is not a crime?" (**Mgt. Int. 3**) "There was always a Traffic Court, and why I say that, because there wasn't a courtroom. I do not think there was a courtroom called a Traffic Court, but Magistrates organized themselves in a way where they just organized themselves, "This is traffic. We are going to deal with traffic." (**Mgt. Int. 3**) "…the obvious, which is that the UTurn system has really helped us." '(**Mgt. Int. 3**) "So, the UTurn system was introduced against the backdrop of a number of things. Two or three of the major reasons were: A crowded judicial system. So, under the previous system or way of doing business, which was a manual issuance of tickets, persons had 14 days in which

		to pay their tickets and 60 days before their matter automatically ended up on the court's schedule. So, if you missed payment of that ticket within the 14-day period, automatically on the 60th day (and it used to be noted on the ticket), automatically on the 60th day, you had to present yourself before a magistrate to answer to your matter. The other issue was that if you missed that court hearing, you were now subject to what you call a warrant being issued for your arrest. I say that to say that previous to the introduction of the UTurn system, a number of traffic violations were considered criminal offences." (**Mgt. Int. 4**) "We have ease in terms of what we call due process. It allows for a little more due process when it comes to these licensing matters, because previous to now as well, another issue that would have taken place is that there were a number of persons who would have been erroneously issued tickets. So, let's say someone had a permit similar to yours, or a fraudulent permit using your permit number, you may very well find police outside your doors and you having to answer to a magistrate for a charge that you have no idea about. So, because of this, everything being on a

		shared ICT platform, it makes it so much easier now for persons -- both the State, as well as alleged traffic violators -- to have their matters treated with." (**Mgt. Int. 4**) From the Government standpoint, we were looking at an easier way of collecting revenue or streamlining a way of collecting revenue. We were also looking at that reduction in the road traffic accidents, road fatality rates. We were also looking at de-clogging the judicial system. From the standpoint of the violator, or from the alleged violator, we were looking at persons having quicker access to justice, because a number of these matters still went for trials for years. So, you have a matter before the court for a blown headlight, and that is before the court for five, six years. Now, if you put that in the system, you can actually get a hearing the next day. (**Mgt. Int. 4**) "Yes, so we definitely see efficiency in terms of the collection of revenue, and not only the collection of revenue, reconciliation, because collection is one thing, but bringing the revenue to account is another thing. The other thing the Judiciary did back then was that the Judiciary being the sole receiver of revenue for traffic tickets, when it came to the whole reconciliation, it

		was messy, for want of a better term, in that their system dealt with everything specific to the court." (**Mgt. Int. 4**) "So, people coming to pay maintenance; people coming to pay court fines; court fees, all those things were bundled into one thing. Now we have it streamlined into one what we call a line item, in terms of Budgets, so we have everything coming into one line item, as it relates to it, so it calls for easier reconciliation of the revenue. We also introduced LINKS payment as an option, and I would say by the end of this month, we will see the introduction of online payments when it comes to the payment of your fines and your fixed penalties. Finally, with the law enforcement officer, and you will see that when you go out on to the field with them, is that it reduced the time of issuing a ticket from as much as 20 minutes to two minutes." (**Mgt. Int. 4**) "People coming to pay maintenance; people coming to pay court fines; court fees, all those things were bundled into one thing. Now we have it streamlined into one what we call a line

		item, in terms of Budgets, so we have everything coming into one line item, as it relates to it, so it calls for easier reconciliation of the revenue. We also introduced LINXS payment as an option, and I would say by the end of this month, we will see the introduction of online payments when it comes to the payment of your fines and your fixed penalties. Finally, with the law enforcement officer, and you will see that when you go out on to the field with them, is that it reduced the time of issuing a ticket from as much as 20 minutes to two minutes." (**Mgt. Int. 4**) "So, it is a way for the State to recover the revenue and they have looked at it from the viewpoint that: At some point in time, the person must want to carry out a transaction with the Transport Division, whether it be with your vehicle; whether it be with your Driver's Permit...and it is a way of us recovering revenue." (**Mgt. Int. 4**) "So, if the person doesn't pay that ticket within the time that we give them to pay, we impose administrative sanctions against them so they wouldn't be able to use their permit to carry out

		any transactions with the Transport Division. They wouldn't be able to transfer the vehicle, apply for a certified copy, whatever transactions they think may be simple and they can slip through, administrative sanctions will block them. Now, if someone accumulates anything between 10 to 13 demerit points, it can lead to a six-month disqualification of their driving permit. If they accumulate anything between 14 to 19 demerit points, it can lead to one year disqualification of their permit, and anything in excess of 20 demerit points can lead to a two-year disqualification of their driving permit." (**Mgt. Int. 4**) "Now, we don't just automatically disqualify a driver's permit just like that, because the law prescribes that we must take them through something called due process. And due process requires us to write to the person, because this is a technological system, this is the technology, the system telling us that the person has accumulated this number of demerit points, as a result of these tickets being against their driving permit record. So, the responsibility is on us now to write to them officially. This is where a manual process comes in, to then give them an opportunity to write us and tell us why their permit should not be disqualified." (**Mgt. Int. 4**)

		"Now, I will tell you, that process has actually saved a lot of people from disqualification, in that the law allows us to pursue a disqualification, once we have confirmation of delivery. Once we have confirmation of delivery of that notice, the law allows us to proceed with the disqualification. Once TTPost records and advises us that the notice has been delivered, to notice of Intended Disqualification. If persons don't exercise that opportunity, it places them at a serious disadvantage, because it might very well be a case where the person may not have been issued with those tickets, because as TC may have advised you in your interview with him, we still have a lot of sanitization of the records taking place, coming out of UTurn as well and coming out of their regular processes at Licensing." (**Mgt. Int. 4**) "So, we are picking up a lot of duplicate driver's permits; we are picking up a lot of duplicate vehicle registration numbers, and what those things cause is that it may very well be somebody else who committed the traffic violation, but because we have the same driver's permit, it

		may... Of course, the address will be different; the date of birth will be different, so that is how we are able to then decipher who it really is. So we really try to advise persons, as much as possible, put your representations in writing, because you might find yourself being disqualified when you are not supposed to be disqualified, and then you might be entering two different battles before the court, because you may say, "Well, all you don't have a right to disqualify me," but then from the Judiciary's side, the Judiciary says, "Well, they gave you an opportunity to reply and you didn't reply." (**Mgt. Int. 4**) "So, our major, major, major operations every day is dealing with those persons who have exceeded the demerit point threshold; dealing with persons who might have had a contested matter and in terms of applying the relevant demerit points against their records." (**Mgt. Int. 4**) "So, we have a process also in place here where we developed a case file. Every contested matter, a case file is put together and then sent to the Judiciary via electronic means." (**Mgt. Int. 4**)

		"So, you have an attorney instructing another attorney. So, my attorney cannot pursue a matter for me unless I instruct the attorney in writing. That's why attorneys will tell you they take instructions from somebody. So, they don't see the electronic instruction as a legal instruction. So, in addition to the electronic instruction, we also do a semi-manual instruction, because we save it electronically, but you receive it...from a person. So, if anything, they could hold that person to account." (**Mgt. Int. 4**) "Because when you see them putting together their judgments, they say the court orders, when the police are putting forward their court orders, they say, "As advised by the Traffic Enforcement Centre on such and such date, a notice to contest was filed with the Judiciary of Trinidad and Tobago..." So, it is not simply that the system advised them. There must be that human element" (**Mgt. Int. 4**) "…just like how we developed our standard operating procedures of doing things, the Judiciary, TTPS, and not just the TTPS, other law enforcement agencies have a responsibility

		to amend their standing orders, because they have standing orders by which they operate. So, there were standing orders always existing for how they are to treat with traffic matters." (**Mgt. Int. 4**) "It has been working for them (***Judiciary***), more than any other agency in the country, because everything they do is online. I don't know when last anybody had an in-person hearing. Just about three months ago, I sat in an Appeal Court hearing here and the Prisons have their special room that the prisoners go into, and they talk to the judges and whoever through that platform. Their lawyers don't even sit next to them as before." (**Mgt. Int. 4**) "So even as we introduced this electronic system, we have to have a file, a manual file for everybody. So, we have an electronic file, as well as a manual file for every single person who has passed through the system." (**Mgt. Int. 4**) "I mean, the electronic records remain there forever and, of course, we have this tier two data storage system so, I mean, we have the space for it, but they always advise us, from the jump,

		that we must have co-existing that manual, physical file, because even the decisions of the Transport Commissioner are recorded on a file. The final decision is put on to the system, yes, whether he advised us to disqualify or not disqualify, in a case of disqualification, those decisions go on to the system, but they also have to be recorded on a file." (**Mgt. Int. 4**) "I think it is the way how the law is designed. If it has to change, it has to come through some sort of legislative amendment. Because the law specifically designed it in such a way for that communication to happen between us and the alleged violator, or with us and the alleged person being disqualified. The only way to do that is in writing, because the law says, "in writing."… If it says electronically, or if it says via email, via electronic means, it gives is a little leeway. But it specifically says in writing." (**Mgt. Int. 4**) "Personally, the part I wish that we could go fully electronic is that communication with the Judiciary.

		Yes, because it is very time-consuming on our end. It takes three resources from me every day to have to put together these case files to send to the Judiciary exactly what the system told you." (**Mgt. Int. 4**) "I understand why, but I just wish we could, whether it be through legislative amendments; whether it be through some sort of rules; whether it be through some sort of policy documents, I hope we can get to that stage where the electronic communication is good enough." (**Mgt. Int. 4**) "…we now, through advising the Transport Commissioner, function as mini-arbitrators, in terms of dealing with these matters and making recommendations to him as to what the facts are. We may not make a recommendation, or we cannot make a recommendation to him in terms of if to disqualify or not, but what we recommend to him, or what we put forward to him are the facts of the matter, and we have to put forward those facts from both the Licensing side of what the system tells us, and from the person who is about to be disqualified." (**Mgt. Int. 4**)

		"So, I think regardless of wherever we reach in terms of one hundred per cent sanitization, one hundred per cent sanitization will cut out a lot of those persons who have been evading the system. It will allow us to treat with them a little more cut and dry, but it will still require that human element as we go forward." (**Mgt. Int. 4**) "So that one of the challenges that has been presented to the court is that there are a number of officers who don't show up for their hearings. This time around, though, the magistrates throw out the matters. If you don't have a statement from the complainant, the person who brought the matter, who initially issued the ticket, if you have a non-appearance of the complainant, there are some magistrates who will hear the matter ex parte, meaning that based on all the evidence they have before them, they could make a judgment on the matter. But there are some who say to you that they must see the law enforcement officer, or the law enforcement officer must appear on the link for them to hear their side of the story, because they may have questions." (**Mgt. Int. 4**)

		“In order to further break it down to you, we have had since the inception 18,000 matters being contested, but we have lost 1600 of those matters. If I go further down into the statistics, I can guarantee you, half of that is as a result of the non-appearance of the complainant. Why would the complainant not appear, the police officer or law enforcement officer not appear? Because he had to leave his physical location and go to the relevant district court to have the matter heard. He couldn't get a vehicle, so he didn't want to go. He couldn't drive through the traffic to go up there with his personal vehicle, so he didn't want to go, and the matter gets dismissed.” (**Mgt. Int. 4**) “Besides revenue leakage, people get away. People get away. So, people who legitimately should have been charged and convicted beat the system and they boast. They pump their chests and beat their chests, and they say, "I get away. I beat the system. Just contest your matter, the officer not coming to court anyway," which is what used to happen before, because people used to say, "Yeah, I taking my matter to court, because the officer wouldn't come to court anyway." The good thing with this, there is no criminal element to it, so we don't have that whole criminality attached to your name, but what you have now, just as you say, you have leakages

		in terms of revenue; you have leakages in terms of people who should have been held to account or reprimanded for traffic matters getting away." (**Mgt. Int. 4**)
2. Combating corruption and enhancing transparency *Corrupt practices have plagued the Transport Division for many years. It has affected their reputation and ability to conduct their operations with maximum efficiency. The implementation of the UTurn is a major*	**2.1. Addressing historical corruption in licensing processes.** *The issue of corrupt practices in the Transport Division is long standing, going back decades. The UTurn is one of the measures being taken to address this generational problem.*	"And when we talk about organization, we talk about the context of ensuring that we have the systems within the organization; that one could trust the system; trust the data that the system gives out, and therefore as well be able to trace any traditional issues of what we call wrongdoing within the system." **(Mgt. Int 1)** "…we have to be able to ensure that persons receive their Driver's Permits in a legitimate fashion and not having to receive a Driver's Permit through what we call corrupt practices, etc. We also have to ensure that vehicles are duly registered, because those are the key products of the service of the Transport Division." **(Mgt. Int 1)** "…if we are talking about cultural change, persons may have been involved in illegal practices in terms of issuing those two core products, Driver's Permits and registering vehicles, so

step in addressing this problem.		therefore we have to ensure that those key protects are sanitized into the input phase, as well as the persons who now utilize those products, meaning now the driver himself, as well as the vehicle, those data are more or less accurate to the enforcement officer. At the onset, you would find yourself losing cases in court if those things are not properly registered into your system." (**Mgt. Int. 1**) **"**Where we found problems -- and I must mention this -- persons began showing serious fear for change based on the fact of what we may have found through the digitization process within the environment. And therefore in doing so, we discovered a number of things, sadly, that staff would have found themselves in the hands of the Police through the digitization process, and this is what the fear was, in terms of being able to digitize and put new processes in place, they could not have continued to do things the way they used to, and then in itself, it would have revealed, for example, through the digitization process, we were able to identify a number of vehicles which were stolen and able to identify who were the staff that were involved in having them re-registered within the system." (**Mgt. Int 1**)

		"We were able to discover vehicles that were transferred fraudulently, and here is where we found staff resisted not wanting to support the change in the system, because of fear of probably not being able to participate in things that they may have benefited from." (**Mgt. Int. 1**) "We also discovered, when dealing with customers, a high percentage of persons we had driving in Trinidad and Tobago who couldn't read, and we questioned. Well, it just tells you what happened back then. How did they get their Driver's Permit? You must be able to read the signs on the road. You must be able to read to pass your regulations etc." (**Mgt. Int. 1**) "When we had to explain how the system is going to operate, that is where the whole issue of artificial intelligence came in, and what we sought to highlight were the benefits of the use of technology, in terms of reducing incidences of corruption. Because if you are aware of Licensing Division and some of the challenges or some of the accusations that have been made about Licensing Division for years, these primarily were surrounded about Licensing being a highly corrupt organization, and with the introduction of technology and the digitization of

		records, what the new system was able to do was to put checks and balances in the system, which makes it very, very, very difficult to continue or to practice corrupt behaviour." (**Mgt. Int. 2**) "So, no one can just go into the system to make changes, without having a time stamp of who accessed the record, and it will have the name and time. Now we can identify, and you will have to answer: "Well, why were you in there?" And I do not think it is that easy to reverse, so you can't reverse things. I think that is one of the good things about the system, because of the time stamps and the checks and balances it has put in place. It has really minimized the opportunity to tamper, to change, or to engage in corrupt practices." (**Mgt. Int. 2**) "I think what is impressive to me is that I know that inherently, with the use of technology, it is a fair system that is — I don't want to that say tamper proof, but you can't really tamper with it. And it doesn't matter who you are. So you could be at any level, if you commit the offence, then I am sorry, you just have to go through the process. So, my option was either pay the traffic ticket or go to the court and contest it. But it is not the option to call a friend to tell the friend, "Go and check a record and remove it."

		(**Mgt. Int. 2**) "I think one of the other indicators will be less corruption, because of the inability to tamper with information, since we have moved from a paper-based system to an electronic-based system." (**Mgt. Int. 2**) "…everything is at their fingerprints -- the permit information. So, if somebody presents a fraudulent DP to a law enforcement officer, they could find that immediately. If somebody is driving a vehicle and has not made the relevant changes to Licensing, or the vehicle might be a fraudulently plated vehicle, they are immediately able to pick up that because of the easy access to the Licensing database that they have on the field currently. So, it has definitely seen a reduction -- and the Traffic Commissioner will talk about that soon on television -- but in terms of the reduction in stolen vehicles, it has definitely accounted for that. A number of persons who have lost vehicles 20, 30 years ago, as crazy as those numbers sound, have been able to find those vehicles as a result of some of the operations that we do here at the TECU."

		(**Mgt. Int. 4**) "We have been able to take off a lot of people who have fraudulent DPs as well out of the system." (**Mgt. Int. 4)** "From the Licensing side, we definitely did, because once UTurn -- as bad as this is going to sound, UTurn now has cut out that supplemental income that a lot of these persons would have been benefiting from in the systems that have gone before, because when you have manual systems, it is easy to doctor documents." (**Mgt. Int. 4**) "So, I know it definitely has disrupted persons who, you know, saw corruption as a means of supplementing their income." (**Mgt. Int. 4**)

		"Of course, for the very obvious reasons of crime. So, there are some persons we just can't reach to because of where they live and the safety it presents to the courier who has to deliver it. So we would have attempts, from the time the person probably reaches ten, you will probably see attempts on our end here to try to reach that person, reach that person, reach that person, and then it might reach to 89, and then it becomes a bit of a scandalous thing, but it shouldn't, because the law dictates that we must take that person through due process." (**Mgt. Int. 4**)
	2.2. Building public trust and encouraging accountability *The communication around the changes to the Act and the implementation of the system is meant to make*	"We have also seen, in relation to that, while we look at the staff, the organization, we look at how has the customer benefited, because we view the customer as part of the organization, and those are our factors. We measure that by customer satisfaction. And while we live in a world where persons criticize a lot, we are very mindful of the fact that we will find persons who criticize because they can no longer participate in the wrongdoing of the previous environment, and we also find persons who will support in a positive way because they benefit from the output and the speed of the new service." (**Mgt. Int. 1**)

	the public feel more comfortable with the changes.	"The new system came with a number of different arms of the Ministry working together. We had the Communications Unit; we had the Legal Unit; we also had external agencies working along with us, which is the TTPS, the Judiciary. All of these departments were responsible for formulating their own communication plan even before the system went live, informing the public of what is to come as it related to their environment. I think we had a heavy communication plan that the public was well informed, in terms of what was expected in the new system. We also used all the different levels of media. We used the traditional; we also used the new media: Internet; Facebook; interviews, in terms of disseminating the information for this product." (**Mgt. Int. 1**) "One of the things I look for, my key stakeholder measurement is customer satisfaction. I listen to the critiques, regardless of what forum they use, whether it is the Internet, whether it is by emails, whether it is on the radio programmes, the talk shows, I listen for the positive and the negative." (**Mgt. Int. 1**)

		"The Ministry also has forums where persons could communicate their likes and dislikes about the organization. Those are things we look at also, in terms of tools to ensure that we are reaching the persons in terms of what is required." (**Mgt. Int. 1**) "…it now attempts to hit to the core, to your behaviour. So, it now tells you that you can be disqualified, you can be suspended and, therefore, they feel for some reason it is a bit heavy-handed. Nevertheless, though, we on the other hand interpret that in the fact that there is an opportunity to change behaviour and to now meet with them face to face, because someone who faces sanctions, someone who faces disqualification now has an opportunity to meet with the organization face to face and have a conversation towards making things better." (**Mgt. Int. 1**) "So, we find when they have to now participate in a rehab programme and the agency recognizes you cannot read or write, we are now giving them the opportunity to go and do what we call the ALTA (**Adult Literacy Tutors Association**) programme, the adult literacy programme. Therefore, when they go back on the nation's roads, they are expected to be better drivers, better citizens. So, we are seeing that as a spin-off benefit, not that we are going back

		to say, "We are coming down with a heavy hand and we are taking away your license, because you probably got it by fraudulent means," we are saying, "No, let's see what we can fix now," basically. And a number of persons have been given the opportunity now to go and learn to read and write." (**Mgt. Int. 1**) "…we started to explain the system (to the public) that was being used to facilitate what we were trying to achieve. So, what basically we were trying to achieve as an organization was for the first time in Trinidad and Tobago and many Caribbean countries, we were trying to introduce a demerit points system, as well as a revised traffic ticketing system. What we used artificial intelligence for was to streamline the operations of the system." (**Mgt. Int. 2**) "When we started promoting the project, it was not promoted from a technology-based implementation strategy *per se*. We started talking about basically the benefits of implementing a new demerit point system and traffic management system to create safer roads in Trinidad and Tobago."

		(**Mgt. Int. 2**) "…each organization had a role to play in terms of the sensitizing and educating their stakeholders. So the Ministry would have taken the lead in terms of communicating, and all of the other supporting agencies that partnered with us to execute would have, one, developed their own communication strategies to educate their internal workforce, which in essence is a major thing, because your workforce really comprises of the citizens of Trinidad and Tobago." (**Mgt. Int. 2**) "…if you have an educated work force, it means that they will share information that is relevant and information that is accurate. So, our communication strategy focused primarily on internal communication. The Ministry has over seven thousand employees, so it means that seven thousand persons we would have educated about this project, who would have gone home and talked to their families and their friends and families, so you see the ripple effect. Then we did a national campaign, which included a national marketing, advertising, communication and digital strategy. And that would have been shared by the other agencies as well."

		(Mgt. Int. 2) "The introduction of the project, from a communication point of view, took place on a phased basis. At least one year before the project was even introduced, the Communication Department started a pre-campaign to alert persons that this is coming. It was done primarily in-house, just talking about the demerit point system; what the demerit point system is going to include what are the changes that are going to come. We would have set up interviews with the media, to have the media, as an external agency, write about the project, so that persons become aware." (**Mgt. Int. 2**) "It is not that in 2020 we just dropped on them, "Here, this is coming." We did this lead-up, so people knew that it was going to happen. At least a year in advance, consistently we were talking about, "This is coming. This is coming. This is coming." Before we actually launched the national campaign, we thought it was very important to have stakeholder consultations with key groups, because the success of a project of this nature is highly dependent on buy-in from your stakeholders." (**Mgt. Int. 2**)

		"From as early as August 2019, we started consultations with the business and manufacturing associations; we had consultations with car rental companies, contractors' associations, driving schools, banks, insurance, credit unions, and all of the financial institutions, private car companies, taxi drivers, maxi taxi driver, the taxi associations, trade unions, NGOs, the media, and then we also did a group of consultations in Tobago, to ensure that we captured the sister isle." (**Mgt. Int. 2**) "Now, what were the conversations that we had in the consultations? The conversations we had in the consultations were primary based on education. So, the first part of it would have included a detailed presentation, which was done by the Legal Department and the Licensing Division, which primarily walked the participants through the process to how we got here. It spoke to the suite of legislative reform; it spoke to what we are trying to achieve; it explained what the demerit point system is; how the demerit point system is going to operate; what are the benefits of the demerit point system to the different stakeholder groupings; what may be some of the potential challenges that the stakeholder groupings may experience with the introduction of the system."

		(**Mgt. Int. 2**) "So, it was two-pronged. It was partly education. We also wanted to get their feedback, although we would have moved beyond the consultation process earlier to develop the framework to move forward, we still wanted to get their feedback based on what the final product would be, and there was still room, if we felt certain things needed to change and we felt it would have had a significant disruptive impact, we would have taken into consideration some of the feedback we would have gotten. Then we also took the time to tell people, "If this is coming, based on the sector that you are in, this is what you need to do to prepare yourself for the introduction of this system." That is basically what our consultation process would have been like. We had a mixture of in-person and online consultations." (**Mgt. Int. 2**) "The online consultations were done for the groups that we felt were more receptive to the process, and the groups that we felt that were allies, because in essence what we had to do was a stakeholder mapping process. And the ones that we thought may have been adversaries or would have been really pushing back against it, we felt that the in-person consultations would

		be better, where we had face-to-face discussions. We allowed them a platform to talk and share their concerns. At each consultation, there was detailed note taking which was filtered back to the Legal Department for review and final consideration before we implemented the system." (**Mgt. Int. 2**) "I think what was important — and something I would like to highlight — is one of the big things for this project is that continual listening was a part of the project. So, from the time we started execution, we have been continuously listening to our stakeholders, and that is evidenced by the recent changes we would have made to the demerit point system, which took place a year later, because we would have listened to the grievances. We would have seen how the system operated. We paid attention to the feedback, and then we made adjustments to the system, based on that." (**Mgt. Int. 2**) "I think one of the biggest issues is that people saw the system as being punitive. Because it is fines; it is based on a fine system. And if you are telling me if you are driving against the speed limit, you have to pay for a ticket and you have to possibly get demerit

		points, everybody is going to be up in arms about why you have to be like this. In addition, we were now coming out of Covid, so the argument was, "You know people are not working anywhere, I mean, we just had a really challenging time where persons would have exhausted is lot of their savings, having not been able to work because they were home, and now you are coming to drop this system on us." (**Mgt. Int.2**) "Having run the campaign for a couple months, there was a general understanding of what the demerit point system is. There was an acceptance that with the introduction of the technology, there have been some improvements in the Licensing Division. However, there is still a long way to go." (**Mgt. Int. 2**) "There have been numerous comments on social media, where persons would have sent messages to say that the Licensing Division is way more efficient; the customer service is way better, and that's because things are moving faster, so the number of time you spend in Licensing has been reduced considerably. And I think that can be attributed to the UTurn system, the introduction of technology, and moving from a paper-based system, which was a

		lengthy process to go through a big thick book like this to find records, to now being able to pull up stuff electronically." (**Mgt. Int. 2**) "…the communication strategy did not end when the programme was implemented. As a matter of fact, it is still ongoing. So, what you would see now is, although Licensing Officers are going out, and Police Officers are going out, while they are giving tickets, they are educating you." (**Mgt. Int. 2**) "So, I know that there is continuous education, so we are continuously upgrading our websites so persons could be aware. We are on the road giving information, letting persons know about the demerit point system, about the UTurn system, about the Red-Light Camera Enforcement System that is to come. So, we are continuously doing that, as well as, as I said, we would have launched the project in 2020, and a year after we launched the project, based on feedback, we would have gone in and made amendments." (**Mgt. Int. 2**)

		"So, for example, persons had concerns about the fact that if, for example, your park lights were blown or your brake lights were blown and you didn't know, maybe you had a certain number of demerit points. We looked at it and said, "This is true," because it is possible you could go to the mechanic and he could fix your light, you come out and then it is not working and you don't know. So maybe the number of points allocated to that may be too many. But we were only able to make those changes by understanding the pulse of what was on the ground and understanding the concerns." (**Mgt. Int. 2**) "So, we have continuously been communicating. We have created mechanisms for feedback, because feedback also very important, and I think that feedback would have filtered into a revision of the system and I am quite sure in a couple years, if there is need for changes, the team will review and make the necessary adjustments to suit." (**Mgt. Int. 2**) "…people heard about it coming. In some cases, they may not have had all the information, although we would have been communicating. So, there was a general concern, I guess as everything in life, there is a fear of change and there is a fear of the unknown. But I think

		generally, once people understood what was coming, while they may not have accepted it, they conformed to it. There was still grumblings in certain corners that the Government was trying to take money from the poor man. We had just come out of Covid. The Ministry's response was very simple: We don't want to give tickets. If we don't have to give tickets, we will be happy not to give tickets. So, all we require of you is to operate within the realm of the law and do what is required. Once you do that, then there is no need to be concerned about a demerit point system or you even losing your license or having your license suspended." (**Mgt. Int. 2**) "…eventually people just had to accept the fact that this is here and there is a need be more responsible and to accept responsibility for your irresponsible behaviour on the roadway." (**Mgt. Int. 2**) "We also collect feedback via what we call social listening. I mean, people love to talk on social media, so part of our job is really to go and look on social media and analyze what is being said, to get a sense of the pulse of what is on the ground. Now, while this would have waned considerably after a year and a half of implementing it — it was very, very active within the first year of the project — we got a sense of it. We would then

		analyze the type of feedback we got on our page. We also encouraged persons to inbox us with messages, so that's the way we got our feedback. And then, I think, persons would reach out directly to the Transport Commissioner. Key stakeholders would reach out directly to the Transport Commissioner. For example, if the head of the Driving Schools' Association has a challenge, they would write to the Transport Commissioner, and all these things were documented, and I guess would have filtered into the change we would have made about a year and a half ago." (**Mgt. Int. 2**) "One bugbear for us is people come to the Judiciary's website to access UTurn, when they want to file their notice to contest. Because of the fact that you filing a notice to context with the court, when the system is down, people believe it is us, but it is not us. And that is a burden that we carry, because then they keep calling us, and you know Trinidadians, the thing is going to be due at 4 o'clock this evening and at quarter to 2:00 they now trying and then the system is down, and then the system is down and they are going to be unable, because with UTurn, once you are out of time, you cannot do anything on the system." (**Mgt. Int. 3**)

		"…the system knows that your ticket gave you until, what is the date today, 28th of September to pay or to file your notice to contest by 4 o'clock. 4:01 you cannot file anything. The system has those validations into the programme. People have been making mistakes -- no, not the system is down -- people have been making mistakes on the platform, and they can't get through, so they start bothering the Judiciary, when we can't do anything about it. And then that time might pass and then they begin to threaten you, probably with a lawsuit or something, but really and truly, it is UTurn you have to go to. Maybe I didn't foresee that kind of impact on us when the decision was made to put that on the Judiciary's website, although I did raise it subsequently, but it was never changed." (**Mgt. Int. 3**) "…from the jump when we were evaluating this whole thing and preparing for the introduction, we recognized that there is a key principle in change management, which is resistance to change. We knew that would have happened from both the public side as well as the persons who have to now operate the system from the side of Licensing. From the public side, we set about on a number of public education campaigns -- a number -- and we targeted every sector.

		Outside the public, the sectors that interact with Licensing on a daily basis, like the used car dealers, the new car dealers, the insurance agencies, delivery companies, all those agencies, we sought to bring them to the table and literally have one-on-one conversations with them, before the introduction." (**Mgt. Int. 4**) "In fact, I could tell you, we have had persons who have come before us who are actually ministers, magistrates, judges, attorneys, doctors, who have faced disqualification of their driver's permit as a result of the accumulation of demerit points. So even how they communicate with those persons face-to-face, as opposed to how you deal with the man who is taking a chance and working PH is a change. I mean, you have to adjust your communication style. We have trained them in that, in terms of how they communicate with them in writing; how they communicate with them face-to-face; how they interpret the correspondence being written to them." (**Mgt. Int. 4**) "I always tell people, members of the public who we meet with who have been disqualified, "You know, up until this point, you are not considered a criminal. You just ended up on the

		bad side of the law when it comes to your driving behaviour and we have a responsibility to rehabilitate you and reform you and bring you back out, eventually. But if you drive whilst disqualified, you then commit a criminal act. If you drink while driving, it is a criminal act." All. Well, I shouldn't say if you drink while driving, but if you are over the legal limit, and you are in control of a vehicle, those things are criminal acts." (**Mgt. Int. 4**) "…they have ways of evading the law. Some of these people, I can tell you as well, we deal with a lot of criminals too. There are no ifs or buts or maybe. We are talking about criminals. We are talking about men who kill; out on bail... So, I mean, it is not simply a courier just getting that to them in hand. It is not just simply putting out an ad, and we are getting them to come in to us voluntarily." (**Mgt. Int. 4**) **"**They are criminals, and if they could have sat in a prison cell for ten years on a murder charge, or robbery charge, or rape charge or whatever, what it is for them to do the same thing

		for somebody who trying to take away what they determine is their bread and butter, because some of them... Interestingly today, there is a PH driver who we came across who had 47 demerit points, and when he was interacting with one of my staff, he was telling her he said, "I just come out from making five years in prison, you know." And so, she came to me shaken saying, "I just interacted with this guy who said he just made five years in prison." He told her he is working PH because he can't get a taxi badge, because the police certificate of character, and that kind of thing, he cannot get it." (**Mgt. Int. 4**) "Yes, so we really try to get that into the heads of the drivers. You know, I always say when I talk about road traffic accidents and road traffic fatalities, people don't understand the seriousness of... They always come to you and they say, "All I was doing was talking on my cell phone." "All I was doing was going over the speed limit by 10," not understanding that distracted driving is a major contributor to road traffic accidents and road traffic fatalities; not understanding that speed has been the number one contributor to road traffic deaths; not understanding that there are a number of persons who have gotten into accidents while not wearing their seat belts and have been injured as a result of not wearing

		that seat belt. There are some who will tell you too, "Well, the seat belt could trap me in my vehicle." (**Mgt. Int. 4**) "As the Transport Commissioner and I always say, it doesn't sometimes resonate with people until it actually hits home, until you actually experience losing a family member or having to deal with a family member who is paralyzed as a result of a traffic accident, or dealing with some extended family of somebody who has to bury somebody as a result of a traffic accident, and sometimes these things can be avoided. That's what police officers do when they do speed exercises. I always tell people that. A speed exercise is not to get revenue for the State, you know. Every time you see a speed exercise, you are hearing people saying, "They looking for money to pay..." (**Mgt. Int. 4**) "…the Budget passed yesterday, if you see a speed exercise today or tomorrow, they will say the Government looking for revenue, and that is the furthest thing from the truth. Because when you look at the areas where they do a lot of speed exercises, these are the areas where there is a lot of fatalities: The El Socorro, the Caroni, the Piarco, the Mon Desir stretch, the

		Point Fortin, the Fore Shore in Diego Martin. Those are areas over the years where there were -- the Beetham -- a number of road traffic accidents which resulted in fatalities over the years, and as a result of speed; as a result of distracted driving; as a result of people just not obeying signage." (**Mgt. Int. 4**) "And that's why I said whenever I talk about the system, I always say the majority of the population is still very much well behaved on the roads, in terms of adherence to the road rules." (**Mgt. Int. 4**) "[Motorists are] Very law-abiding. There are still some, and I am sure you interact with them. If you drive to come here or if you have traveled, you see it. You see it and those are the ones, if you search them on our system, you will find them, because they are just people who misuse the road habitually. And that culture change, as I say, it has to come -- in some instances, we thought they would have felt it through their pockets as it relates to having to pay the fines. We thought they would have felt it through having to do without their permits. In some, you

		thought they would have felt it by having to go through this whole rehabilitative process, and then there are some who I think just have to learn it the hard way. Just lose their life." (**Mgt. Int. 4**) "I am sorry to put it that way, or somebody close to them has to lose or become a victim of a road traffic accident for it to resonate, because when I see people that we have reformed back before us again for the same sort of traffic violation, it tells me that you didn't learn anything. You really don't care about you as -- you don't care about your personal safety; you don't care about the safety of other road users, and the only time it might really resonate inside you or you might really see it in your heart, or your head, or your brain, or your soul, or your gut is when it happens to you. So, it is a harsh way to put it, but I think that is the only way some of them will realize, but it is still the minority. It is still the minority. I always say the majority of the persons who hold valid licenses or valid permits, the majority of them are still very much well behaved on the roads." (**Mgt. Int. 4**)

3. Transformation of work practices *The introduction of the UTurn led to evolving work practices to adapt new ways of approaching traffic management. The UTurn facilitates flexible work environments, collaboration, and rethinking traditional workflows to enhance efficiency, employee satisfaction, and public engagement.*	**3.1. Standardization of processes and efficiency** *Processes are now uniform across different locations, leading to increased accountability and better delivery of service to stakeholders.*	"…the first things we had to do: one, digitize our data. That is number one. Two, be able to find mechanisms to treat with duplicates. That is our biggest nightmare: Two persons having the same Driver's Permit and having the same vehicle registered twice. So, we had to digitize the data with the aim of sanitizing the data. That's one. Two: Making sure the data is then accurate for that sort of environment. And in doing so, we were faced with many challenges, because the data itself was strictly a paper-based one." (**Mgt. Int 1**) "We had to more or less capture that data from handwriting. As well, we are talking about data in the hundreds of thousands. Currently we had to deal with over -- I mean, it is a small country, but we had to cater for over one million vehicles registered in the system; over 600,000 persons who had Driver's Permits within a population of 1.1 to 1.2 or so. So, it was a lot of work, in terms of getting the digitization done." (**Mgt. Int 1**) "We were able to treat with it, one, by basically setting standards and policies in terms of what is required in a number of our services; the introduction of desk manuals, giving staff the guide

		as to the way of doing things; ensuring there is synergy across the different nine sites, in terms of conducting certain transactions. We also had to put things in place in relation to procedures for disciplinary measures, letting the staff know what could be the outcome if they find themselves in doing the wrong things." (**Mgt. Int. 1**) "One of the biggest issues we faced, though, was that there were no proper standards and guidelines for staff in conducting these transactions. Several sites had different ways of recording transactions and that was a major problem that contributed to some of the challenges. But through the synergy of setting the guidelines, the desk manuals, the regular policies, we were able to control a number of those things." (**Mgt. Int. 1**) "I, as Commissioner, I am looking for consistency, because we strongly believe that one disgruntled customer, in spite of what side of the fence, could be devastating to the environment. So, we find for some reason there is a slight lack -- and it is very slight -- of consistency in efficiency." (**Mgt. Int. 1**)

		"I will give another example. Traditionally, if you come to Licensing to renew your Driver's Permit, even though there was technology existing back then, every single person who renewed their Driver's Permit had to be entered in a ledger still, a manual ledger, where someone will write your name, and so on, before they more or less captured your data. This new system basically removed that from the environment. From the time you sign for your Driver's Permit on the electronic system, that builds the ledger, so there is no need to write. The ledger is now a strictly computerized one." (**Mgt. Int. 1**) "…before, if you did a transaction in Arima and you went to Port of Spain, it couldn't work because they couldn't find your files, because your files were not on a centralized database. Now, under the UTurn system — I think this is under the UTurn system — your files are on a central database, so you can go to any location across the country, and they can pull your records." (**Mgt. Int. 2**)

		"This is one of the first projects that was successfully executed in a long time that used a cross-functional team across the Government. So, it comprised the Ministry of Works and Transport, the Judiciary of Trinidad and Tobago, the Trinidad and Tobago Police Service (TTPS), TTPost, and I can't remember the rest, but from the top of my head, these agencies." (**Mgt. Int. 2**) "What the UTurn system is, the UTurn is a shared ICT platform. When we say shared ICT platform, it is shared with the Judiciary of Trinidad and Tobago, the Transport Division, all law enforcement agencies and TTPost. TTPost's role is that of the collection of the revenue that comes into the system. As well as the disbursement of correspondence in relation to a certain aspect of the Act that requires us to write to alleged traffic violators." (**Mgt. Int. 4**) "The purpose of law enforcement agencies is that of the access to information for the issuance of tickets. So, they have real-time access to the Licensing database… both the Driver's Permit database, as well as the vehicle database. And then from the Judiciary's side, they manage everything to do with contested matters. So, if a matter has been contested, which persons

		have a right to do within the law, there is that platform that the Judiciary and UTurn share in terms of exchange of information. The Traffic Enforcement Centre, we are the hub for that entire system. So, we manage everything, administrate everything with regard to that system. That is UTurn in a nutshell." (**Mgt. Int. 4**) "So, if another branch of TECU exists, if we expand operations, let's say we have an office in South and one in Tobago, they follow the same standard operating procedures that we follow here." (**Mgt. Int. 4**) "One of the things we did as we sanitized the records and, of course, these thinks will happen within the next two years, three years, maybe five years from now, what we will see is we will have an electronic footprint for a lot of persons within the Licensing database itself, not just UTurn. So, we have email addresses and that kind of information for persons who conducting renewals and conducting transactions, because that kind of information is captured at the point of

		renewals now. And the reason we have included that is so that eventually we could move to communicating with people electronically." (**Mgt. Int. 4**) "We have an arrangement with TTPost where they have a responsibility to deliver the correspondence for us. So, every correspondence that leaves the Traffic Enforcement Centre, a TTPost courier will come here every day, Monday to Friday, pick up that correspondence, sort it at their mail centre and get it to the relevant person. But we have a lot of issues in Trinidad, with some areas still being deemed as high risk." (**Mgt. Int. 4**) "That is the other point I missed in the early part of the discussion. Now, if you were issued a traffic ticket in Princes Town years ago, you had to go back to Princes Town to pay it. If you got it in Point Fortin, you had to go back to Point Fortin. If you got it in Arima, you had to go back to Arima. If you got it in Grande, you had to go back to Sangre Grande. Now, with UTurn, you go to any authorized TTPost location, you pay that ticket. The same goes for your hearings, your virtual hearings." (**Mgt. Int. 4**)

	3.2. Workforce adaptation and training *The various users of the UTurn have had to change their ways of knowing and are exposed to training to ensure that they are using the system optimally.*	"We had to even treat with our recruitment challenges, ensure we have persons with the right qualifications, the right skill-sets, and then too the existing staff, we had to treat with the fact that we had to more or less send them on training and bring them up to par, because we discovered a number of persons fell through these changes. For some reason, the company would have made them redundant, and we choose to use the reverse, to train the staff, get them up to par, as well as to make the systems user friendly so they could easily adapt to the environment." (**Mgt. Int 1**) "I will tell you something, and I have to answer this question from the context of the Public Service. A public servant in Trinidad and Tobago does not think similar to someone in the private sector, because it is not easy to make a public servant's job redundant." (**Mgt. Int. 1**) "…apart from just the workflows that were introduced, we had to clearly develop literature, documents informing persons, "This is the policy," reminding them of what the policies

		were -- were and are, because some were changed and some, we have to remind them of what the previous ones were." (**Mgt. Int. 1**) "In other words, we might be constant and sometimes it takes one shift in staff who may not be properly trained as to what the new processes are, could create a serious domino effect with customer fall-out and even the system itself. So therefore, what we had to do is to ensure that each staff who we have placed into our environment is properly oriented into our processes. That is one of the major issues we faced, making sure you have good, proper HR support of the staff." (**Mgt. Int. 1**) "One of the challenges we faced when it comes to technology, we find the older heads sometimes are not on board one hundred per cent with that, and in this organization, a number of my subordinates who are just under me are of that category and, therefore, I have a challenge there." (**Mgt. Int. 1**)

		"The training we would have put forward did not create the impact we wanted at that level. And even before, one of the things is that those persons would have been recruited over the years, most of them over 20-plus years when the system allowed those persons to come into the organization with criteria that do not match the standard on which the organization has operated, and they may not have developed that over the years in their personal development. That is a major challenge for me as Commissioner in the organization." (**Mgt. Int. 1**) "In utilizing this system, the TTPS had to change some of their standing orders, even as broad as some of their standing operating procedures to accommodate such, which would have now strengthened the way the service works in the TTPS." (**Mgt. Int. 1**) "So, you bring people into a training environment, and you begin to train them as to what the new procedures are, what the new processes are. The Protocol and Information Unit will begin to send out, most likely by emails, information on what is going to happen, and so on." (**Mgt. Int. 3**)

		"What's happening here is that it would have been cashiers taking payments and then all the accounting and reconciliation and all that would have been done manually. Now, what the Judiciary had to do, however, is to begin to develop our case management information system, which now is where the technology came in, to gather all this information, to input all this information. So, tickets would have been at the Magistracy, so now the Magistracy is being introduced to this case management information system." (**Mgt. Int. 3**) "…you would find that there were -- I wouldn't say push back, but complaints. And are there complaints? Because remember, if I have become so proficient in using a pen and now you are giving me a keyboard, which I am not accustomed to, that is a small change. You have slowed down by work. I could make so many errors -- and there would have been errors -- and then I feel less proficient as a clerk, because now there are errors in my work, whereas if I was using a pen and a notebook, I know what to write. You understand what I am saying? And then you had to be correcting me, because I didn't do this, and I didn't do that. So, you found that there were those kinds of impacts on staff and impacts on the project." (**Mgt. Int. 3**)

		"So, we had to make sure we had the right staff. We went out there -- I am trying to remember if these guys were in. No, no, we had to fill some positions. We never had programmers in the Judiciary before and we had to get them in… we got in programmers and then we made them part of the project team, so that they understood what the requirements were, because the IT Department was not formalized sufficiently to have all the right resources." (**Mgt. Int. 3**) "So now we had to begin to get some resources in, and the resources were really developers. So, we had a position for two programmers; we brought in two programmers. But further to that -- this is probably outside the scope of your thing -- which had to revamp the structure of IT and do a new IT structure to get in particular skills. So, for example, these programmers had to go out there and get their own requirements, but now on staff, we have business analysts who would do that data gathering and data analysis and putting together the requirements that are needed for a developer. Before, the developers had to do it themselves, so it changed our operation in IT." (**Mgt. Int. 3)**

		"I had to bring a lot of institutional knowledge into this whole thing. But the reason why I answered you the way I did just now -- and again, because the Unit did not have all the skills that were needed to do a project at that level -- the reason why I answered you just now the way I did, which does take it outside of UTurn project, is that up to now, for example, I am working on an IT strategy that is going to require additional skill sets. Why? Because IT is changing so exponentially, in terms of the technology world, and let's go down to your AI and all of that, that I am beginning to realize that my IT Unit has to change. I have to change. I have to change the way I approach IT now. IT is no longer a tool. IT is a partner in the business." (**Mgt. Int. 3**) "At the stage of UTurn, we were not properly structured. We didn't have the resources we needed, so I had to do a lot of things that other people should have been doing." (**Mgt. Int. 3**) "And persons who were not really tech-savvy too, I think I saw a lot of the older ones especially -- when I say older, law enforcement officers, that is -- being more resistant in the

		first instance, because we had a scenario to play in training and you saw them holding on to this thing, because they were going from a basic phone to a smart phone. So, it was like graduating from that... It was like graduating to a smart phone, so we had to kind of get into their psyche to say, "Listen, this is just like operating the smart phone you have in your pocket. This is what it is..." and we had to break it down for them like that. So, in the first instance, of course, you realize there may also have been a lot of errors in terms of inputting the data, because part of the system also allows for that human interaction." (**Mgt. Int. 4**) "I think for us it is very difficult having to face persons whose sole income is that of driving, so delivery drivers, taxi drivers, maxi drivers, that catchment of people, that group of people, those are the hardest people we have to face on a daily basis. Sometimes you hear the frustration in how they (TECU staff) speak, but they have such a nice way where they bounce things off of each other out there. So even if somebody might be having a tough time treating with a matter, they may, you know, bring in somebody else in terms of dealing with it." (**Mgt. Int. 4)**

		"In terms of training, I think... we are responsible for training in the first instance. And then the training, of course, was partnered with the Police Training Academy, which is the legal thing. The Police Training Academy is responsible for training of all law enforcement officers, whether it be in traffic, in criminal investigations, anything you could think of related to policing, the Police Training Academy has responsibility for that. But I think we could get to a stay now where -- and we did suggest it to them -- especially during the height of Covid, we did suggest to them to develop these instructional videos." (**Mgt. Int. 4)** "And even in terms of Court and Process, I have met with Court and Process on a number of occasions to let them know that the officer does not need to physically sit next the Prosecutor for the matter to be heard. Both of them could be on the platform on two separate systems and they could communicate. There needs to be a communication before, because of that whole summary of evidence requirement, but the TTPS especially -- not all law the enforcement, but TTPS especially -- they have not embraced that technological aspect when it comes to the hearing of their matters. It causes a lot of loss of time." (**Mgt. Int. 4**)

	3.3. Role evolution within the organizations *The roles of stakeholders in the organizations evolve as employees become more proficient with the system and find ways to integrate the technology into additional practices.*	"The challenge I face, however, with this new system I want to say though and I want to advise if I have the chance to do it over again or to recommend, is that it places a lot of burden on the Commissioner, in terms of making certain decisions as it relates to execution of the core aspects of the Act that govern this system" (**Mgt. Int. 1**) "Remember, the system carries a management system and then it carries what you call an enforcement system. There must be a decision. It is no longer the court sending persons to jail, but it is now the Commissioner making the decision to apply sanctions or not to apply sanctions. So, when there were probably several courts deciding whether a warrant should be issued yes or no, there is one Commissioner who has to now decide whether if 10,000 persons didn't pay their tickets, I am the only person who looks at that to say whether I apply sanctions or not apply sanctions, if we write to them." (**Mgt. Int. 1**) "Secondly, if someone has to be disqualified and you have to give an "intend to disqualify" and someone responds to that, it is only the Commissioner to look at those things and make a

		decision whether to disqualify. That is a very difficult task. And that brings a lot of burden, I can tell you, on to the Commissioner -- sleepless nights, because I am also pressed with a timeline to do so. I have a certain amount of time to make that decision; a certain amount of time to respond to the persons etc., and it is something that I am raising with management. So, while the system and the technology is good, it brings a lot of burden on the Commissioner." (**Mgt. Int. 1**) "IT has to be embedded in everything that we do, and I am reaching a point now where I am saying -- I actually have it documented -- we have moved from computerization to digitalization, and now we are moving to automization. And a colleague of mine asked me, "You sure you didn't mean automation?" I said, "No, I mean automization," which means that people have to now own their processes. Allow me to give you to solution, but you must own it. This is your process. We are automizing it." (**Mgt. Int. 3)**

		"You know, it is interesting that computerization has brought things a lot easier in many ways, but people complain. So, when they complain, I tell them, well, they could just go back to how we were. "No, we don't want to two back there." That's quite interesting. Of course, I only do it as a threat, because there is no way I am going backwards." (**Mgt. Int. 3**) "And that is because there is so much to implement, and all of it is going to come back to what IT needs to produce at the end of the day. So, if we have to accommodate a change in the organization, the process people have to work overtime, they have to get it. They have to have meetings; they have to sit down over the legislation; they have to determine what they are doing; they have to go into the offices, and then at the end of the day, they have to document all that. They have to sit down in meetings for long hours and determine whether we standardize it or this one doing it this way and that one doing it another way. We have to agree and then we have to get it approved and then it reaches to IT. So, everybody feels as though they don't have a life." **(Mgt. Int. 3**)

		"You always think that you have all the right people at the table when you are planning, and then you forget something, and it is only when you put the technology on the ground and you start to operate it, then, oh, this arises and that arises and you have to be there to fix that. I think we may have faced one or two of those things, and then we had to contact the project manager at the Ministry of Works, who will then contact the UTurn consultant, who will then have to do the updates on the system." (**Mgt. Int. 3**) "…we have an agreement with the developers, so that agreement is a yearly agreement, so we have what we call a serviceable agreement, so anything to do with corrective maintenance, routine updates of the system, and that kind of thing, we have that kind of constant interaction with them." (**Mgt. Int. 4**) "You don't have to go back to the district where you got the ticket to have to appear. You could sit down in the comfort of your home, from your phone, from your laptop, from your computer and you have the matter heard." (**Mgt. Int. 4**)

4. Data-driven and transparent decision-making *The use of the UTurn encourages leveraging data analytics and fostering transparency in decision-making. Decisions are made using evidence-based insights, open communication, and accountability to drive informed choices, improve trust, and*	**4.1. Support decision-making through real-time data access.** *The use of real time data helps different agencies make more efficient decisions.*	"I am happy to sit in the chair as Commissioner at this point in time, due to the fact that data is now centralized and is now easily accessible and retrievable, and that helps me significantly in terms of making decisions. One: Reports, trends, as well as research and investigations, in that because the information is now there, it is easy for us to also foster better relationships with external stakeholders." (**Mgt. Int. 1**) "We could get to that stage[5], but it is so legal in nature. Yes, it is so legal in nature. So, it is not simply like a telephone bill query or a T&TEC query, I want to query my meter reading, and it gives you a system message, and the system message will just tell you, "Send this information, send that information." It is not as simple as that. It is like that because, as I said, people communicate differently." (**Mgt. Int. 4**) "Those are persons who put forward representations to us saying that they have never been issued tickets, but the system, the electronic system tells us that they got tickets. But we know

[5] The stage of the TECU becoming more automated and allowing the UTurn to communicate with other systems.

enhance organizational effectiveness.		that sometimes at the end of these investigations, it may have been well be a duplicated permit; an officer taking a 6 for a 9; an officer inputting the incorrect vehicle details, or various issues." (**Mgt. Int. 4**)
	4.2. Audit trails to control the process of decision-making *The ability to document all user interaction has revolutionized the monitoring of decision-making.*	"I think what I have observed, and I just want to be clear with this, what I have noticed with all the agencies that utilize this new system-- I want to find the right words -- they are very mindful and exercise a high level of due care as it relates to access for information or performing their tasks. What I mean by that is because of the fact that we built a system that traps and traces and audits every single thing that is done, persons appear to be much more serious and proficient in terms of what they do." (**Mgt. Int. 1**) "I will give an example. If an enforcement officer -- and an enforcement officer, meaning whether police officer, traffic warden, license officer -- issues a ticket with an electronic device, any mistakes can go easily picked up and be audited and could be addressed by their supervisor, so persons exercise due care in putting in the right information, because you could now monitor how many mistakes are being done. They exercise due care because a page from a ticket book can no longer go

		missing, because they know exactly who would have issued that ticket. So, you find that sort of flexibility exists, in terms of seriousness." (**Mgt. Int. 1)** "…the person who is now registering a vehicle or transferring a vehicle will take time to ensure that the written new policies are more or less adhered to, because we can now track and trace that this transaction was done by this individual. So, one could now benchmark the written policy and see if the electronic behaviour conforms with that policy. As a result of that, we are seeing fewer challenges of wrongdoing within the organization." (**Mgt. Int. 1**) "I think what happened in the past with Licensing was that Licensing was primarily based on a paper-based system, and with the digitization of records, and then now the introduction of the UTurn system, everything is now electronic and there are checks and balances. One of the things that stood out for me is, if you get a ticket and demerit points are registered or a demerit point is registered on your record, if someone tries to go into the system to alter or to tamper, it is recorded." (**Mgt. Int. 2)**

		"…unfortunately, within the first month of launching the demerit point system, unfortunately I got demerit points. I literally turned down a street that I did not know was a one-way and the Police were waiting there for me and they gave me a ticket. Now, what I think was impressive — and I told them I tested the system for them to make sure it was working — at no time would it have gone through my mind that I was going to ask anybody to go in the system and tamper with the records. That never crossed my mind, but the fact is, even if, just say even if I wanted to do that, it was not possible." (**Mgt. Int. 2**) "But everything now, there is a time stamp to it, so even as an officer, I just had a debate with an officer recently who told me that she could issue a ticket to somebody two days after she detected the violation. I told her no, because the system now dictates that the date and time of the offence must be stated on the ticket, and there is no way to manipulate that. And the only way to get away from the manipulation of that is that the officers are now forced to do that in real time. So, you cannot detect a violation now and then find John Brown two days after and say, "Oh, I remember I saw this happen two days ago and I can now issue the ticket," because the date, time, location, all those kinds of things, are recorded on the traffic ticket in real time."

		(**Mgt. Int. 4**) "And where there is human interaction with any ICT system, there will be errors. But the thing is, the audit trails and the time stamps allow us to track these things and different policies we put in place allow us to track these things." (**Mgt. Int. 4**) "So, each officer has an email profile. When I say email profile, that is specific to matters related to Section 88(A) of the Act, which is sanctions and disqualifications. We have a QR code signature for everyone, so we know who would have communicated with the relevant persons. At that stage where we communicate with persons, we try not to let persons use their personal profile, and when I say personal, their work or the organization email, but the ones that are attached to their names. We keep it general, in terms of Licensing Sanctions, a Licensing Sanctions administrator, but from our end, on my end in terms of monitoring, I am able to track who communicated with the person, based on that QR code assigned to the individual." (**Mgt. Int. 4**)

		"The other thing we have built into the system is that of audit trails. So, everything that persons... every click they make on that system is recorded in an audit trail. And both the Transport Commissioner and I have access to that audit trial. So, if any discrepancies take place, it is easily identifiable, because we know who did what." (**Mgt. Int. 4**) "There is a trail of it, even in terms of persons who see electronic files from start to finish, there is a name stamp and a time stamp to it, so you can't tell me you imposed it two weeks ago when it says that you only did it today. So, it allows for that kind of monitoring of staff in that kind of way." (**Mgt. Int. 4**)
	4.3. Performance metrics and accountability	"As a matter of fact, we can see it, one, by the output in terms of the number of transactions we cover per day, and when I say transactions, we look at the core services: Renewals, vehicle registrations, transactions as it relates to change of ownership; number of persons renewing their permits for the day etc. We can see that in the context of the output, and that is happening too because when we look at the staff, the ease of the way that staff can now do business

	A major function of the UTurn is that it facilitates the ability to establish clear performance metrics that measure success and ensure accountability. Management can easily monitor progress, and track how well stakeholders are performing in achieving organizational goals.	through the technology and the level of integration, we see a difference in behaviour in terms of how the staff reacts." (**Mgt. Int. 1**) "So, therefore, you are naturally seeing more being done on the nation's road. While it is not about tickets, it is about the fact that we can have a greater level of enforcement to treat with the matter. So, again, we look at the ease of work, and we also look at the quantity in terms of measuring those factors." (**Mgt. Int. 1**) "I get emails many times from the TTPS inquiring of data, so that they could now more or less use that to benchmark performance of the police station, of the zone they work with, of the district, even down to the officer. So, it has the capacity to provide information for performance management." (**Mgt. Int. 1**)

		"So, if under the old system, doing certain transactions took this amount of time and we had this number of transactions, then under the new system, there should be a comparative increase or a comparative decrease in numbers." (**Mgt. Int. 2**) "There was a reduction in road traffic accidents. It was the lowest in a long time. I need to find out the exact year for you, if it was to 2021 or 2022. However, there is no way to measure if the reduction in the accidents was directly linked to the introduction of a demerit point system. That is the only challenge." (**Mgt. Int. 2**) One of the main successes for me would be, one, the improved operations in the Licensing Division, which have been evident, not only from within the organization, but from outside the organization, and two, the reduction in corruption and corrupt practices. (**Mgt. Int. 2**) "So, TECU, as simple as the staff numbers look, they have a heavy, heavy work schedule. So let me take it first from the fixed penalty notice side, and when I they fixed penalty notice, we

		are talking traffic tickets here. So, once a traffic ticket comes into the system, we monitor the life cycle of that ticket." (**Mgt. Int. 4**) "Meaning that from the date of issuance, the person has 15 days to contest it; 30 days to pay. And that is just the fixed penalty alone. We also deal with what we call the administration of the demerit point system. So, anything to do with demerit points being applied to a person's driving permit record, we deal with that. So how the fixed penalty notice system and the demerit point system marry is that demerit points are applied upon conviction, or at the expiration of the 30-day period for payment. So I say that to say, if an alleged traffic violator is issued a traffic ticket for a violation that carries four demerit points and they pay it off in one day, it means that the person would have accepted liability for that ticket and the demerit points are applied within a 24-hour life cycle of that, and TECU would monitor that." (**Mgt. Int. 4**) "So TECU, as simple as the staff numbers look, they have a heavy, heavy work schedule. So let me take it first from the fixed penalty notice side, and when I they fixed penalty notice, we

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		(**Mgt. Int. 4**) "…we did see a reduction. That is actually one of our KPIs. The reduction in road traffic accidents, reduction in road traffic fatalities, that is also a clear indication for us that there are aspects of the system that are working. Also, a reduction in the number of cases that come before the court in terms of DUIs, because while the DUI element... DUIs and dangerous driving, there is a cross between that and the Traffic Court and the Criminal Court." (**Mgt. Int. 4)** "…we use that as one of our metrics as well. When we see a reduction in those kinds of things, we know that there is an increase in enforcement, because that side of it too is also monitored by us." (**Mgt. Int. 4**) "Another thing we look at are persons who would have been -- So we look at persons who have been getting tickets over the years. So, let's say you got a ticket in 2020 for seat belt, and you never got another ticket, there is an expunging of demerit points, and all that kind of thing. The

		ticket remains on your record, not as a permanent stain necessarily, but the ticket remains there to tell us that you did get a ticket in the past for it. But the points are expunged after two years of good driving behaviour. So, we monitor persons over a two-year life span as well to see if you have learnt the lesson the first time around." "So, we have a very, very, very close working relationship with the Road Surveillance Unit of the TTPS. They monitor the statistics a little more than we do…they will use those statistics to determine where to conduct their road traffic exercises. Because we don't have a place in law to instruct or to guide even, in terms of where to conduct exercises." (**Mgt. Int. 4**) "From the side of the members of the public, I think there is still that kind of resistance to it. As of today, if I could just give you a figure here -- let me just tell you, and there is a reason for giving you that figure -- so as of today, as of 3:50, which is the very moment we are having this conversation now, there have been 323,000 tickets issued on the system. From inception to now, 320,000.

		Now, that doesn't represent 320,000 drivers. Because I always tell people, if I go into those figures into detail, that may very well represent about 25 to 30 per cent of the driving population." (**Mgt. Int. 4**)
5. Organizational and cultural shifts *The UTurn, as a frontier technology in the public sector, contributes to the evolution of organizational structures and cultural dynamics as organizations adapt to changing environments. It encourages the use of additional and*	**5.1. Shift in organizational priorities** *The introduction of technology has forced management to revisit the ways that tasks are executed as well as the reevaluate the importance of core duties and responsibilities.*	"Well, from the organizational goals, one of the things we saw, and we expected to achieve was business processes reengineering. We had to reengineer the way we do things, and by that, I mean a total new overhaul and implement totally new systems. A number of our systems, we had to work on business processes modification, changing minor things to achieve proper data integrity and efficient workflows. Those were some of the goals, as the organization, we had to put in place." (**Mgt. Int 1**) "…on the other hand, which is a strength for me and I am happy about, is that more staff on middle management and junior management, they are the ones who are really driving the organizations with the change and doing an excellent job. But when it comes of the core aspects, to be able to now designate responsibility that utilizes technology, that is a challenge we have. That is something I know will fix itself in the years to come because of the younger

complementary technology that ultimately revolutionize public sector administration.		ones who are coming up will now take that role. Therefore, somebody has to face the difficult times with it now, and I am prepared to bear that cost." (**Mgt. Int. 1**) "…one of the positives under the new leadership of the Licensing Division, because the Transport Commissioner is an IT person, so he understands technology and what he is trying to do is to integrate the use of technology into everything that Licensing is doing, from the digitization of documents, so we are moving from a paper-based system to now primarily electronic based system, and I think that is working for the efficiency of the organization, in terms of how it operates and in terms of turnover times, because at the snap of a finger, you can pull persons records." (**Mgt. Int. 2**) "I think the Traffic Enforcement Center, which is the unit that really manages the operations and that leans the most on the use of the technology, it is the first of its kind in the Caribbean, so there is no other Traffic Enforcement Center, and the work of the Traffic Enforcement Center really comes out of the UTurn system." (**Mgt. Int. 2**)

		"Yes, so within the first few months, let's say the first three months, four months, we did pick up... There wasn't a large number of errors, but simple errors, literally like how the old people will say, "You taking a 6 for a 9." So, where you see a 9 on a permit, you might put a 6 and, of course, that led to exactly what we were talking about earlier on, which is an erroneous issuance of a fixed penalty notice. So, the 623456 number belongs to somebody else and, of course, a ticket would have been generated in that person's name. And while the law enforcement officer may not have issued the ticket because they recognized the error, when we come down a little lower in terms of some of the responsibilities of TECU, that is where we realized that these issues happened and we put some policies in place to rectify them." (**Mgt. Int. 4**) "So, the recruitment process in the public sector is simply, especially for contract employment, is that of interview; pass the interview. Once you are short-listed, you are short-listed based on the fact that you meet the criteria. There will follow an interview. Once you pass the interview, you get through; I guess you are successful. For TECU, we did it a little differently. So, from my position, going right down to the clerical staff, we put a structure in place where all persons were required to do an assessment, a written

		assessment. Following the written assessment, then you were put through a competency-based interview." (**Mgt. Int. 4**) "…following that competency-based interview, once you were successful at the competency-based interview, you were polygraphed. So, everybody went through a rigorous recruitment process in order to be even sitting here operating a system like this, because we knew once persons had certain access to information, questions of integrity come into play. So, to mitigate against that, we sought to do that kind of background check. Even at the point of recruitment. When we started the system, however, what we did was to put some rigorous standard operating procedures in place." (**Mgt. Int. 4**) TC may have mentioned the sanitization of records, as we reach to the point of reaching one hundred per cent, in terms of sanitization, I think we could reach to the stage where we could make some legislative amendments to take some more -- I know it is a tougher approach to treating with some of them, because by that time, the system will be clean. As it is now, the system is not totally clean, so we can't take that kind of hard and fast approach.

		(**Mgt. Int. 4**) If we get to that stage where we could comfortably tell the legislators, "The Licensing has a clean slate. There are no duplicated permits; no fraudulent DPs in the system; no fraudulent vehicles in the system; no duplicated vehicles in the system." Of course, the legislators could now say, "Oh, well everything that comes into the system now is as good as gold." (**Mgt. Int. 4**)
	5.2. Continual learning and adaptation *The organizations using the technology are fostering a culture of consistent learning while they adjust to shifts in ways of knowing that are*	"One of the things with having to change that type of behaviour, one needs information. We need to be able to gather trends; gather statistics, as well as put a higher level of transparency and accountability into our systems. Those are the key factors that we believe are necessary for change within the organization" **(Mgt. Int 1)** "So, we have a healthy relationship with other enforcement agencies, like the Trinidad and Tobago Police Service, as well as even the court, as well as even the agencies responsible for registration of vehicles, like the Ministry of Trade, Customs, and so forth. It has made that measure of integration, sharing of information much easier, as Commissioner."

	influenced by use of the technology.	(**Mgt. Int. 1**) "I think one of the really successful things about the UTurn system is the connectivity it creates across Government. So, the UTurn system has connected Licensing Division, the Judiciary, TTPS and TTPost. And it feeds information and makes it much easier for traffic matters and licensing matters and the ticketing system to work." (**Mgt. Int. 2**) "For example, the plan is, in the very near future, if a Transport Officer or a Licensing Officer stops you and pulls up your record and there are charges out on your name, that is supposed to come up on the handheld devices. One of the major things under the UTurn system is the use of handheld ticket devices, which means an officer is on the road and through that database, they can be pull information from Licensing. So, if they pull me up, they are getting my name, my license information. They can tell you if my license is expired. They will be able to tell me how many demerit points. When we did the demerit point system, they were able to identify a lot of stolen vehicles on the road in routine traffic checks." (**Mgt. Int. 2**)

		"In real time. And in the near future, that should be able to link to TTPS records outside of Licensing. So, if you are a criminal and there is an outstanding charge for you and they pull you over and they pull up your information, they will not only be seeing your Licensing information or your demerit points. If there is a charge out for you, it also will be able to come up on this device. To me, I think that is fantastic, because it moves beyond just the Licensing Division, but could also assist in tackling the crime and criminality." (**Mgt. Int. 2**) "There is always that need (for human interaction). I always believe -- it comes down to even, let's say, like someone making an accusation about you, in terms of your character. You will go to whatever lengths to defend that." (**Mgt. Int. 4**)

Appendix C Data Analysis (TECU)

THEME	SUB THEME	QUOTES
1.Automation of routine tasks & transformations of existing practices *The use the UTurn system to perform repetitive and predictable activities without human intervention or minimal intervention. Automation serves to increase personal and organizational efficiency, reduce errors, and free up human resources for more complex and strategic activities*	**1.1 Digitalization of public interactions and data workflow** *The UTurn supports multiple aspects of real-time monitoring, data analysis, automated decision-making, data gathering and interorganizational collaboration and communication.* *The system introduces new digital communication channels between the public organization and citizens, such as automated*	"If you look at what the intended job specs were to look at, for example, I believe that we thought it would be a lot more manual; more like computer-aided, instead of the software being developed to say, "Okay, this is specially what we needed it to do" (**TECU Interviewer 1)** **Researcher (R):** Do you know if their database would not be recording? Or is it if they take the video, it just automatically comes to the UTurn system? Are they recording the data anywhere on their end or is it all stored here? **Interviewee(I):** I think it is all stored here, because I do not think they have, based on how it is set up, I don't think they have anything else, where they would have it stored. (**TECU Interview 2**) **Researcher (R):** All of the Issuing Officers, they also have a log in access as well? **Interviewee (I):** From their device. Each person has a profile.

	notifications or online portals for checking ticket status. The centralized data storage of the UTurn system may enable more data-driven and personalized interactions with the public, based on individual driving records and history.	**R:** And so, when they issue a ticket, is that logged on their profile? **I:** Yes. Correct. **R:** So, weren't they able to go into their profile and pull up that information from three years ago? **I:** They can, it will just take a while. **(TECU Interview 2**) "They have different restrictions amongst them. What this one might not be able to see is not the same thing that this person might be able to see." **(TECU Interview 2)** "In terms of what happens, I think I will look at the process in terms of the extraction of the data, because that takes a lot of our time, in terms of extracting that data that we need to finish the tasks, for example. A perfect example will be the letters that we have to generate every day. It is literally you have to copy and paste everything from one UTurn, paste it into an Excel document, then transpose that information into the final product that is the letter. Whereas, if you eliminated that part of having to extract the data, if it is that maybe there was a function where the extract is already in an Excel format, all you

		have to do is do a mail merge and finish the process. It would lessen the time that you have to spend, because what they have to do it, because what they have to do is take this basic information and they have to put the address of each person, the offence that they have committed, the fine to go along with it, and all of these would be in different sections of the screen. So, you have to take your time now and paste across each singular person, whereas if you have that information pulled one time, it would lessen the time again, I believe increasing productivity, as well as the letter. So, I think that is one major thing. I think it is a major thing for everybody, that extraction of the data. The programmers can adjust the system but again, there is a cost attached." **(TECU Interview 2)** "I mean, the technology is easy. So even though it is as easy as a mobile phone, some officers may find it easily accessible, in terms of knowing how to use an android phone, even though you know about it, or even if you don't know about it, we still like to train them in terms of how actually you issue the fixed penalty and then troubleshooting. Troubleshooting is a main one out in the field, because you

		don't know what things happen out there, so you need to know how to troubleshoot, in terms of actually issuing the particular notice, or whatever." **(TECU Interview 3)** "So, for individuals, in order to contest a ticket, you have to do it online. There is no other way." **(TECU Interview 3)** There's an audit trail created at every step to see who is responsible for what. **(Field Notes from TECU Observation 2)** **FN2Pic1** (Picture of device used by officers in the field) **FN2Pic3** (The home screen with the UTurn app) Audit trail help users find files and track user interactions with the UTurn **(Field Notes from TECU Observation 3)** **FN3Pic4** (Driver history of demerit points)

		FN4Pic18 (QR Code takes motorist to online payment options)
	1.**2 Automation of key organizational practices** *The organizational practices that the UTurn automates, aids in accomplishing several essential processes in the TECU while assisting in decision-making with minimal human intervention. This automation facilitates inter/intra organization collaboration as well as contributes to efficiency.*	"It still requires the human involvement, but we thought, well, okay, someone would physically have to go in and apply demerit points, and that is something that the software can and does do." (**TECU Interview 1**) "we would say, basically, we want a system that is able to track when a ticket is issued; when it is paid; which kiosk it is paid at the Payment Centre, to apply the demerit points and then run a tab essentially so that for every set of demerit points this person has, it is able to tell us, "Hey, this person has now hit the cap for this particular threshold. You need to send them a letter now." (**TECU Interview** 1) "Over time, we were able to develop systems also that would help us track and log to know what is being done and to make sure everything is being done on time, especially with the court where everything is time sensitive, because you have to make sure the documents are there before the court date. So yes, we came up with systems that would make sure that all documents are going through in the time frame that it should be in." **(TECU Interview 2)**

		“I am not sure how it could be done, but a faster way to extract the data that you need, because where I have to do it now, you do it one by one and copy and paste. I guess that leaves room for human error. Whereas if you have something to automatically extract the data that you need to fill in the document, again a gap will close. Because there have been times where I sent the document and then... You know, sometimes you get tired. You review it, you think you are seeing exactly that everything is right, and then as soon as you hit "Send" and you say "Just, let me go back and check," then you see the error and then you have to try to fix again. So, if you have that, probably to help with the extraction of the data...” **(TECU Interview 2)** “It will be faster. Productivity will be higher, because I can get a lot more done in a day and it might -- my time on this would lessen, so that I can spend time now on other tasks that I have to do.” **(TECU Interview 2)**

		"In terms of people's records, people from international countries who need to get their license, they will write to us to find out if they have any outstanding payments and sanctions. So, the system really helps in terms of record-keeping, rather than being manual. **(TECU Interview 3)** System gives a notice at ten demerit points **(Field Notes from TECU Observation 1)** **FN1Pic6** (System Generated Escalation Fee) System does not allow imposition of disqualification before the stipulated time. **(Field Notes from TECU Observation 3)** Staff member was able to identify that the tasks are routine and do not vary significantly from day to day, the same is true for all other members of staff. The only challenge to her job is users who are contesting tickets opt to not use the system to file their grievance, in which case information must be entered manually.

		Ultimately all the information must be recorded in the system, even if it is not user (motorist) generated. **(Field Notes Summary from TECU Observation** 4) Staff members daily practices are intrinsically reliant upon the UTurn's ability to generate the relevant data ensuring that the accurate information can be sent to be used as evidence before the magistrates. **(Field Notes Summary from TECU Observation 4)**
	1.3. Tensions with existing practices (both citizens and employees). *The end users of the UTurn system are the motorists in Trinidad & Tobago. As a group they are most impacted by the*	**Researcher (R):** Right. So, it would be easier to do it online? **Interviewee (I):** In terms of what? **R:** Contesting a ticket? **I:** Yes, yes, yes. **R:** Okay. **I:** But then again, they would use the avenue as being digital and they can't go on the computer; they don't have access. On some days, even in 2024, people don't have internet access.

	effective functioning of the system and the use of the system by the various agents. Their engagement with the system is mandatory once they have been stopped and assigned demerit points. Their interaction and responses to the technology address how they feel about their agency within the system. *The quotes highlight the tension between the new digital processes and existing practices or capabilities of some citizens. This suggests a gap between the capabilities of the new system*	**R:** Okay. **I:** You would think that every household would have it, but... **R:** Okay. **I:** And one of the main things that you need to contest a ticket is an email address. Some people don't even have that, a simple thing as an email address. **R:** Have you seen any situations where, because of this, people had to get an email address or they just... **I:** Yes, or they had to use somebody else's, a neighbor's or a friend's email, or things like that. **(TECU Interview 3)** One staff member in addressing the public became very vocal, reminding the citizen that all of the information is generated at the point of issuance of the ticket and there is no excuse to be ignorant of the law. This person had 149 demerit points, the threshold for disqualification is 10. **(Field Notes Summary from TECU Observation 1)**

	and the public's understanding or willingness to engage with it.	Also of note, are the repeat offenders and persons generally disregarding the rule of law, a potentially cultural phenomenon that is a repeated theme. Also interesting are the lengths people will go to evade the law but end up being caught by the system. In one case somebody applying for a duplicate license and in the other people riding around without a license in the event they are caught they will have nothing to produce. **(Field Notes Summary from TECU Observation 1)** Even though people are accumulating tickets they seem ambivalent to their pending disqualification. **(Field Notes from TECU Observation 1)** **FN1Pic8** (Customer Portal) Citizen has dual citizenship and was disqualified on local (Trinidad & Tobago) permit. Driver then started driving on a foreign permit. Was caught and fined again. **(Field Notes TECU Observation 1)**

		"Member of the public told a courier he was dead to avoid accepting receipt of letter from the TECU. He was later held in a road exercise and had to admit he was still alive" **(Field Notes from TECU Observation 1)** FN1Pic24 (Fines accumulated by a repeat offender) A question prompted by the researcher in response to a current case on the desk. The case involved a gentleman who said he took it upon himself to enquire about his status because he knew he may have had some issues. When he enquired of an officer who he randomly met in the street, he realized he had been disqualified and came to get that resolved. The question therefore was around what kind of information the consumer can access to verify his or her own status, so we checked the customer portal. In that process we discovered that what the customer sees may not be the same kind of information that the officer who is on the road sees and is certainly different to what the backend users see. It is apparent that this gap in communication can contribute to confusion. **(Field Notes Summary from TECU Observation 3)**

		Anecdotally, older drivers are having more challenges with the system because of their unfamiliarity with these advances in technology and so they still require human intervention. **(Field Notes Summary from TECU Observation 3)** For a driver's license to being reinstated, drivers must participate in drivers' rehabilitation program, pay off tickets, and driving test. This information is entered into the system. The current rehabilitation classes are conducted by an external agency; the plan is to have the class conducted by the Transport Division which would help streamline the process of getting the information into the system. **(Field Notes from TECU Observation 3)** "Did you check the back of the ticket?" Is a common phrase uttered by members of staff when dealing with the public. All tickets generated by the system have information at the back giving instructions on when the ticket should be paid and the process for contestation. **(Field Notes from TECU Observation 3)**

		Email received during observation from a driver who says he did not know he was in breach and was arrested for driving while disqualified. Driver complains there's been no response from his various attempts at inquiry. **(Field Notes from TECU Observation 3)** The user portal is not complex however it does require the person filing the contest to have the ticket information; in a case where the ticket is misplaced it would prove challenging to contest the information. There is space for the driver to add comments, video and pictures. This information is available both to TECU and the Courts. **(Field Notes Summary from TECU Observation 4)** In a question posed to the staff member about trends of motorists contesting tickets, she identified four main themes: 1. victimization by the authorities, 2. inability to pay, 3. innocence about the allegation and 4. user error by the issuing officer. **(Field Notes Summary from TECU Observation 4)** **FN4Pic1** (Customer Portal of the UTurn)

		FN4Pic7 (Copy of a ticket issued to a motorist) **FN4Pic29** (Contestation details: “I believe I am being victimized by this particular officer” **FN4Pic32** (Contestation details: Officer “Driver drove off as officers approached” Motorist: traffic plan not in place making maxi drivers a target for officers) **FN4Pic34** (Continuation of case from Pic 32. Motorist: Officers blocked my vehicle and assaulted me.) Customer was issued two tickets at the same time and contested both at the same time but put different addresses for each of the tickets. This resulted in court dates 3 years apart (2023 & 2026) (**Field Notes from TECU Observation 4)**

		FN4Pic42 (Contestation details. Officer recorded on the system that motorist said, "you do what you have to do, I will just contest the ticket" Motorist: "The police officer said I was holding my cell phone") **FN4Pic44** (Contestation details. Officer recorded that the motorist said, "Officer I want to see you prove I wasn't wearing my seatbelt" Motorist: "I was wearing my seatbelt because of health issues I was just moving it from my chest")
2. Focus on Monitoring & Verification *Monitoring involves real-time oversight of information generated in the field as well as varied internal processes and communication with the Judiciary. Verification in the UTurn examines the validation of data accuracy, device and*	**2.1. Shift in job function and role** *In the TECU, roles are clearly defined based on the organizational chart however the actual day-to-day practices may require fluidity in the execution of tasks. There are also roles that have been reconstituted as staff engage*	"because of how we kind of met the software here and had to learn it...it was just a matter of shifting your perspective as to what you thought your job would be." **(TECU Interview 1)** "I was of the view that if the staff are to function as analysts, they should have a full idea of how the system works from start to finish and not just in one task or in one role. I mean, 'jack of all trades, master of none,' but sometimes when you are a master at something, you really don't see the larger picture." (**TECU Interview 1)** "Persons could change desks, from who is there currently; they have a different style; or the email gets lost, deleted, ends up in an archive somewhere, and they can't find

software integrity, and compliance with the law.	*further over time with the UTurn.*	it. So, then we have to basically either do it over, or we have to find the old record to send back the original document." **(TECU Interview 2)** **Researcher (R):** If you left this portfolio, do you think that what happens after could be seriously based on the way that it is set up now? **Interviewee (I):** I would say to an extent, yes; and to an extent, no. **(I):** So yes, in terms that it is pretty straightforward, the product that you have to communicate. In terms of no, it is a bit designed to my style. **(I):** And because I have been on this particular schedule since inception, it has become mine. Everything is a bit integrated into my style and how I would go about completing the task, whereas if somebody else comes in now, they might have a different idea and approach. But in terms of the final product being completed, I do not think it will be affected too much. **(TECU Interview 2)**

		This staff member has responsibility for tasks related to daily monitoring of the system to see what tickets were issued the day before, check for inconsistencies and forwarding actionable information on to other members of the team. **(Field Notes Summary from TECU Observation 2)**
	2.2 Balancing automation with human intervention *This sub-theme highlight the complex interplay between the AI-driven system, human users, and legal requirements in reshaping organizational practices.* *Organizational policy, legislation and departmental structure mandates that TECU staff oversees, controls, and*	"It is just a matter of us monitoring and ensuring that things fall off when they are supposed to fall off; things are added when they are supposed to be added, not necessarily me having to go to look for (name redacted) record and add four points because she had a seat belt ticket. I think that is one of the things that we envisioned that we said, "Okay, cool, we could get the software to do all of this and more," and then it is less computer-aided, and we focus more on how the technology could work for us" **(TECU Interview 1)** "The front desk sends them across to this side for them to call to talk to TECU. We will get the call. We tend to ask for information so we could try to lessen the person's wait time. So, we say, "Okay, can I have the person's name? DP, the number?" You look up the record first and then from there we will validate our records to see whether the

	guide the functioning of the UTurn. This includes tasks monitoring performance of various system users, troubleshooting issues, and making decisions on data generated by the UTurn. *The system automates many processes, but human monitoring is still required to ensure proper functioning. While the system handles many tasks, there's still a need for human interaction. Staff are constantly working to improve processes and fill gaps in the system. Staff often consult each other when*	correspondence was delivered or not delivered, because most times that dictates the course of action that happens today." **(TECU Interview 1)** "So, there is the main log that will track all contents documents in one main log, and everybody has access, so everybody knows what it is they have to do." **(TECU Interview 2)** "This is one of the gaps we try to fill, because we realize, okay, there might have been some loss of data or information, so we have to be sure our records are in place." **(TECU Interview 2)** "I think we still have that element of human error playing a role, because, yes, I might be able to pull it up from here, but if it is you were directly seeing it from the system and everything is there, but then you are relying on me, a human, at times it has happened." **(TECU Interview 2)** "There are officers that have supervisory training, which means that those persons have access to the back-end like us, as well as it is possible in that particular station,

	interpreting system-generated decisions, especially in relation to legal requirements.	they don't have anybody trained, so at the point in time that they need it, that person is not accessible." **(TECU Interview 2)** "People still want to see a face or hear a voice. Sometimes, for example, they come to you, "I got a ticket." Well, again, trying to close the gaps, we did a little info-graphic of how to contest a ticket. "Here, these are the instructions you can follow if you wish to contest a ticket," and they will want you to literally stand there with them to go through the same thing that is on the document to do it for them, or to just talk to you. Sometimes they just want somebody to talk to, so we get that a lot, people want to see a face. Even if you have to do it online, they still want to talk to somebody." **(TECU Interview 2)** Discussion revolved around the wide functionality of the system and the contribution of human error to some of the issues being faced. Additionally, as identified by the head of the department in his interview, the systems is constrained in large part by what the law of the land says, ergo, while some thing can be system generated, there is need for the creation of physical files to ensure that public service requirements are met. So, a large part of the job is also creating files and sending out notification via

		the postal company because the law mandates that there must be notification before action can be taken and this must be done in writing (email can work for those who respond to emails). **(Field Notes Summary from TECU Observation 1)** Colleagues in the office discuss the process for a rehabilitation letter because they cannot generate one from the system. The officer I am observing reinforces that the legislation mandates that a drive must do the Defensive Driving Rehabilitation course if they are to regain their license. **(Field Notes from TECU Observation 1)** **Picture FN1Pic2** (Pending Disqualification) Staff routinely consult each other for decisions generated by the system. Reference is made consistently to the legislative act that underpins the system. **(Field Notes from TECU Observation 1)**

		This staff member has now been doing the job long enough that he can spot trends, and this has led to him alerting his seniors on questionable issues for follow up. **(Field Notes Summary from TECU Observation 2)** This staff member is responsible for programming all the devices used in the field and each device comes with a unique ID. The unique ID ensures that there is the ability to track who is using the device at any given time, where they are using it (devices are equipped with GPS through Google Maps). The staff member is able to monitor whatever information they collect while using the device including the disbursement of any tickets. The UTurn function on the device is accessed through an app. **(Field Notes Summary from TECU Observation 2)** **FN3Pic1** (Home screen of the different functions of the season) **FN3Pic2** (Screen of disqualified driver information) **FN3Pic3** (Person awaiting the reinstatement of their license)

		The determination of an errant driver's trends is a process managed by the staff member with responsibility for that job. That information is then communicated to the TC. The system does not currently decide if a person is a repeat offender because of legal and organizational policy. It is a role that may be delegated to the UTurn in the future. **(Field Notes from TECU Observation 3)** **FN4Pic17** (Example of a manual filing of a contestation. All filings have to be entered into the system however in cases where a motorists may (i) have limited or no access to a computer (ii) have limited or no access to the internet (iii) be older and needing assistance)
	2.3 Continuous adaptation and evolving system use	"So, we may have intended for the software to do a particular something, and now that it has been operationalized, we think: Hey, we need it to do something else, or to not be able to do what we thought we needed it to do at the point in time" **(TECU Interview 1)**

	The TECU as a new unit and the UTurn as a new system, means that there is a lot of evolution in the practices of the department. Ergo, staff members engage in process of enhancing the efficiency, functionality, and performance of how the UTurn integrates into their processes through modifications of job functions, collaboration and communication. This helps the TECU adapt to new requirements while ensuring the system continues to meet user or organizational needs.	"Yes, the in-person service would have definitely come about on account of us realizing: Hey, we have failure to deliver by TTPost, and we have persons who are just accumulating demerit points. How do we meet these people where they are at, without actually knowing where they are at? So, Licensing literally either meets them on the road in an exercise, or they happen to come here, as is intended by the sanctions, where that process will come in." **(TECU Interview 1)** "The very first time we did the manual service as a practice, back then I used to only do "no calls" files. So that would be all the people who don't respond. I recognized that: Hey, in relation to all these people who are getting these letters and not responding, we have a lot of failed deliveries. So "vaps"! I decided to collate a list and say -- at that point in time, it was Mr. (Redacted) -- I said, "(Redacted), I have these people from this manifest here, the letters are not delivering; they are getting more points, what do we do?" **(TECU Interview 1)** "It became departmental policy where anyone who right now has the skill to generate letters, once there is an opportunity for us to see someone who has come on account

	The introduction of the AI-driven UTurn system has led to a dynamic process of organizational adaptation, with practices and policies being continuously refined and improved based on experience and emerging needs. *Employees are developing new, innovative solutions to address gaps and improve efficiency in their work processes.*	of a transaction restriction -- so that is us inside here -- once someone has come in here and facing issues where they have a transaction restriction blocking them from doing business -- once we could confirm that correspondence wasn't delivered or was failed, or whatever the case may be, then that policy comes into place and you will be served. It is not like assigned to any one particular person, because you don't know what the field times might be; you don't know how many persons like that you would come up with during the day." **(TECU Interview 1)** "A lot of what we encounter right now is reactive. We thought of what we had to do at the point in time. This is what we needed to do; this is how we were going to get it done. And now it is a matter of, okay, the system has lived for a little while, now it is a matter of adopting or reacting to something new, or that we didn't conceive of happening." **(TECU Interview 1)** "As it pertains to the documentation, over time we would have become more innovative with how we would put the documents together, so that it would be faster and more efficient.

		For example, before we would have to do one document at a time and go through, whereas now, we started… so it has become a lot easier and faster to get through and make sure everything is on time." **(TECU Interview 2)** "We have become very innovative over time." **(TECU Interview 2)** "As well as we would have seen where there might have been gaps or we were encountering errors, to close in on the errors, you found ways and means to lessen to make sure that that does not happen again." **(TECU Interview 2)** "For example, in terms of the logs, it is because they started to go out a little bit late, and we were not sure of the timing and the date and keeping track of everything, because it was a lot, so that is how we implemented the sheets." **(TECU Interview 2)** "[We]...put solutions in place to close the gaps." **(TECU Interview 2)**

		“Yes, because again, over time, talking to people, you realize most times there is an internet problem, so you have an idea of how to address it now, whereas before you might it might have been some type of confusion, or you are not sure. You have an idea now of how to give them the best advice possible to help them at least try to solve the issue that they are having.” **(TECU Interview 2)** “Remember in the earlies, people were still trying to get accustomed to it. They had no one to talk to who would have gone through it before, so you are trying to help them along, and they are coming the last day to contest the ticket, "I am not getting through at all," and whatever. Since then, we tried and cut back on that now, because there is enough information out there now on how to go about it, which is why we also did the info-graphic: "Follow this. This is what you have to do." **(TECU Interview 2)** There is continuous evolution in the way the system is used as its (the UTurn system) legality is tested in the court. The use expands as the law deems different actions permissible. **(Field Notes from TECU Observation 1)**

		A major part of this staff member's current function focuses on the resolution of inconsistencies in data, inconsistencies generated by user error of officers in the field. A question was posed about whether the user errors have decreased over the course of time to which the answer was no, however there is a caveat. The officer noted that at the launch of the UTurn system, only Licensing Officers were trained to use the device in the field and there were only 200 devices. As with initial introduction to technology there were teething issues e.g. officers would enter a digit incorrectly leading to the ticket being assigned to someone else. Names spelt incorrectly again leading to tickets being assigned to the wrong person. As usage has increased, there are now over 2000 users on the system, comprised of Licensing Officers, Police Officers, Traffic Wardens, and Municipal Police. The staff member posits, it therefore stands to reason that with more users on the system, there are just more people to make mistakes. **(Field Notes Summary from TECU Observation 2)** The term "audit trail" has been consistently used by members of the unit as well as the TC. Audit trail speaks to the system's ability to record every single person that

		has used it, when they have used it and for what purpose. As a theme this has been consistent when speaking about practices surrounding its use. The argument being both for efficiency but also for accountability. In an environment where gaps in tracking have led to questionable behaviour, the concept of being able to know who is doing what, always, is a major talking point around UTurn usage. **(Field Notes Summary from TECU Observation 2)**
3. Data Driven Decision-Making *The UTurn produces, processes and intakes large amounts of data. This data is used to inform decision-making at the personal and policy level. This data is used to gain insights to guide personal actions and*	**3.1 Real-time information sharing** *The UTurn allows for the instantaneous sharing of information between Licensing Officer (or other issuing agents), the Judiciary, TECU, motorists and policy makers in real-time. All stakeholders have access to the most up-to-date data*	"…We would be advised, "Okay, they are out here. They are on site from this time to this time." Depending on the time of the exercise, if it is an after hour one, after 4:00, then it is a matter of, "Okay, who wants to work on the exercise? They are out here from this time." If it is during working hours, we were also told, "Okay, they are going to be on site there." **(TECU Interview 1)** "So, (redacted) (redacted)has access to the UTurn system in a particularly limited kind of way, but what he doesn't have access to is our documentation as it relates to what letter went out when; what correspondence was delivered. ...the support that they need is for us to basically validate whether this letter was delivered or not, and

organizational strategies and policies.	*possible thanks to real-time information exchange, which facilitates prompt decision-making and reaction to fluid situations.*	for them to capitalize on what type of letter is being served at the point in time" **(TECU Interview 1)** "When he was on the road, if you would have seen him serving some Notices of Intent, that is because we would have confirmed on our end: "Hey, this letter wasn't delivered. You need to serve him this time." So, we will generate the letters here, send it to him and he will just print and serve." **(TECU Interview 1)** "Sometimes they will be on site and if they happen to stop someone where they make an arrest of somebody driving who does not have a valid permit -- there are certain things, validation like that and vehicle information as well -- so any kind of data that they need or that they don't have access to in a ready fashion" **(TECU Interview 1)** "Sometimes they contact me in terms of like individuals they stop who actually don't have their driver's permit, so normally they would contact their Command Centre. They have their channels − the TTPS − but they tend to try and call us first because

		we have direct links in terms of searching people by the person's name, date of birth, things like that. So, they call me in terms of finding information, in terms of people's driver's permit number, if they actually have one, things like that, because individuals lie out there. They say they have a permit and sometimes they never even have a permit." **(TECU Interview 3)** "I assist in terms of things like that, so the calls come for technicalities, as well as misleading information." **(TECU Interview 3)** There is also a lot of interdepartmental collaboration on matters that one individual cannot solve him or herself, and the language reflects that dependence on the system to inform decisions. What is also clear is that while the system is comprehensive there is significant need for human intervention in the execution of tasks. **(Field Notes Summary TECU Observation 1)** **FN1Pic13** (Visual Evidence Uploaded to the system)

		FN1Pic19 (Traffic Enforcement Unit Staff researching the Act to advise a Police Officer currently in the field on whether he has legal standing to issue a ticket to a motorist) **FN1Pic20** (Staff collaborating on the law to help guide a decision to be made in the field) Comments are entered when a citizen's permit is disqualified. This allows officers in the field to have more information when they stop a driver and see why a permit may have been disqualified. **(Field Notes from TECU Observation 1)** He noted that all the information operates in real time and demonstrated through pulling up a screen that showed the most recent ticket that was given. He also noted that now on the back end, he can see all the vehicle information when an officer scans it into the system. In an interesting anecdote, he noted that vehicles that were reports stolen over 10 years ago have now been found based on officers' ability to compare data in real time. **(Field Notes Summary from TECU Observation 2)**

		Staff collaborates consistently on cases that may be more complex where the decisions to be made are not straightforward. **(Field Notes from TECU Observation 3)** Confusing cases are referred to the head of the unit if they cannot be resolved at the departmental level. These may be cases where persons have filed legal action. **(Field Notes from TECU Observation 3)** **FN4Pic3** (Ticket issued at 8:30 am shows up immediately on the system during the observation) **FN4Pic4** (Picture taken by officer as evidence available to TECU and the Court) **FN4Pic14** (Picture of a ticket that has been paid, information is available immediately to TECU Staff and Police/Licensing Officers)

	3.2 Enhanced data access and analysis *The massive data sets available to various UTurn stakeholders, allows for more efficient, comprehensive, and timely retrieval, processing, and examination of data. This enables users to gather insights from larger and more diverse datasets, leading to better-informed decisions and deeper understanding of trends and patterns.*	"Every so often you will have to do statistics to have an idea of comparing throughout the years how things would have been different, for example, from inception till now; like how many persons contested then to how many are contesting now; the types of tickets that people contest, does that remain the same throughout the years?" (**TECU Interview 2)** "We are realizing like, one, there are certain times in the year where there is a break in the number of persons contesting...You will find like around the holidays, where there might have been a spike in the number of tickets issued, you will find there is a spike in the number of contested tickets. So sometimes you look at the holidays this month that would have caused this spike, and then you realize, okay." **(TECU Interview 2)** "Licensing's databases did not have people's addresses. It is a new thing now where when they are renewing their licenses, they have to provide proof of address and stuff like that. So, a lot of − I will say not only old permits, but a lot of older ones and those that were renewed recently, in terms of that change, they would have had addresses, even like apartments and stuff, because a lot of people move.

		So, in terms of enforcing that part of it − I mean, it is a part of the law, but people... It is the same thing with transferring a car. People sell their car, and they don't really transfer it, so it is still his own. So, in terms of that policy, and in terms of trying to enforce that part of it, then we will always get that kind of lack of communication with individuals." **(TECU Interview 3)** A call from an external stakeholder (a police officer) seeking advice on how to proceed with imposing sanctions was dealt with in the following way: a check of the system to see the specific particulars of the case and another check with the "Bible" i.e., the act that governs the use of the system. This process was replicated during the day when dealing with both internal queries and members of the public. **(Field Notes Summary TECU Observation 1)** The stats generated by the system has affected the behavior of the officers in the street. They can now see driver history. **(Field Notes from TECU Observation 1)** **FN1Pic10** (System generated statistics)

		FN1Pic12 (System generated statistics) **FN1Pic14** (Enforcement Officer User Profile) **FN1Pic18** (Data on vehicle offenses) Citizen charged with fraud after applying for a duplicate permit. Staff member was able to track that there was a duplicate and carried information to Department Coordinator to confirm. The motorist's plan was to surrender one license while still holding another one, a fraudulent act. **(Field Notes from TECU Observation 1)** The devices can take pictures, video and audio which now allows officers in the field to record significantly more information than before. On the back end, the administrators of the UTurn system as well as the Judges in Judiciary responsible for arbitrating cases in the event the ticket is contested, can see more evidence of the alleged infraction.

		(Field Notes Summary from TECU Observation 2) As the repository of the data, the TECU is constantly sought after to either explain or provide information **(Field Notes Summary from TECU Observation 2)** The Transport Commissioner makes the decision to disqualify based on the recommendations of his subordinates as well as his own assessment of the matter. All the information needed for the decision is system generated and accessible by staff with the necessary permissions however there is still major reliance on the staff to analyse and interpret the data with the intention of making a recommendation as to what the course of action should be. **(Field Notes Summary from TECU Observation 3)** **FN4Pic11** (Contest Details Screen shows the amalgamation of three (3) data sources: Motorist, UTurn & the Judiciary Information Management System)

	3.3 Supports communication processes *The UTurn system facilitates and enhances the flow of information between users, devices, departments and policy makers through technology that enables effective messaging, collaboration, and information exchange. The ability to engage in enhanced real-time information sharing ensures that stakeholders can communicate more effectively and accurately.*	"For example, at the end of the 30-day period, we send out a letter to people telling them, "Hey, we notice you have this ticket that has not been paid," and they have an opportunity to write back. Let's say, for example, I had one person who was actually able to document that he was out of the country, literally having problems with his credit card and sent an entire summary. So, at that point, from him taking the opportunity to provide calls, we were able to work it back; contact the officer; get a report done, and all of this, to say, "Well, okay, perhaps we will take his word. He wasn't here; it wasn't him," and have that rectified." **(TECU Interview 1)** **Researcher (R):** Have you seen in your interactions, and it could also include some of the external agencies where people just don't want to use the system, or is it that people have been, in your experience, very eager to embrace and adopt the technology? **Interviewee(I):** That is an interesting question. It will factor with the age. So, you find that younger persons have no problem. They are not necessarily interested in talking to you. Older generations, you get a bit more push back in terms of not understanding it. They want to see somebody, because that is how they are

		accustomed conducting business. They are more used to talking to somebody than doing something online. So you find that in some instances, sometimes they and in terms of persons who do not have access to the technology, you will find that they, as well, there is some resistance because they don't know where to go; what to do or where to turn to get what they need done, in the time that they need to do it. So that also happens. **(TECU Interview 2)** **Interviewee (I):** Well, we get the reasons, even minor ones, like let's say seatbelt. When people are being disqualified, the reason they will be saying, "Well, I didn't actually kill nobody. I didn't hold up anybody. I didn't have a knife against anybody." **Researcher (R):** It is a victimless crime. **I:** Yes, but they don't know. We try to explain the danger of not wearing a seatbelt − you can endanger somebody else, putting somebody else's life at risk there. So even though they may not see it as murder, I should say, they would think that it is something that you could just easily just watch and leave. (**TECU Interview 3)**

		Staff routinely consult each other for decisions generated by the system. Reference is made consistently to the legislative act that underpins the system. **(Raw Field Notes from TECU Observation 1)** Email address needed to contest a ticket. This becomes part of the UTurn database (linked to the motorist) and used for any future communication. **(Field Notes from TECU Observation 3)**
4. UTurn system framed by the Law	**4.1 Integrated and interconnected systems** *The UTurn connects the Transport Division, the Trinidad & Tobago Police Service, the Judiciary, the Traffic Enforcement Unit and motorists in real-time integration of various complex data*	"My hope is always that at some point, there is some sort of interconnectedness with Government technology. I mean, that's like the usual... Like, okay, yes, we have TTPS as a ticketing agency, but what does this system look like where it is able to notify an officer on the road, when they stop him for a ticket, without having to use a secondary system, that this person has a warrant? What does the system look like when all the people who left from Carnival the other day, who got tickets, and you will be able to tell them, "All you have tickets to pay." **(TECU Interview 1)**

	management systems. This integration means there must be compatibility and coordination, while the interconnection enables continuous communication and interaction between the various systems.	"I think that is what I would anticipate and hope for TECU and Government to do, as a whole, because there is a lot that could be done. The system is so easy. You are accessible to law enforcement right now, as it stands, with just the technology that we have provided. So, we need to conceive of how best to make this work for as many agencies as possible, without necessarily causing the Government much more expenditure." **(TECU Interview 1)** "There is a perfect way too, to do it, but apart from that, what I actually want or would like to see…I feel as if sometimes I think that is what I would have benefited from. Because I am already so immersed in the software, I feel as if there were certain elements to TECU that could be softer for enforcement. So, for example, the Red Light // Spot Speed people, I feel like could be doing citation notices on site. There are things that could be expanded in that direction, not just in the office, some sort of hybrid." **(TECU Interview 1)** "In terms of this, they have access to all the information that we have access to, in terms of persons that have to come to court, court date, the time, everything. However, they still need a person from here to tell them, "This person has filed a

		notice to contest, and this is the time, date and place that they have to appear in court." So, if that was not necessary, we would not have had to prepare these case files for them." **(TECU Interview 2)** "Outside of TECU, I have to interact with the court, the court processing officers, the issuing officers of tickets, as well as the specific agency, a representative from that agency that will receive all the documents." **(TECU Interview 2)** "So, one of the new things in terms of the Issuing Officer now, remember I told you cases are a long time from now, so you have a lot of them now have cases coming up. They are calling to ask for the documents to help them with their case files that they have to prepare to go to court, because they can't necessarily find back the ticket information from when they would have issued it, let's say two to three years ago. So, they would require our assistance now, so you will find a lot of calls coming in asking for the details from the ticket, or a copy of the ticket, or sometimes they need the supporting media that they would have attached, a copy of it." **(TECU Interview 2)**

		Researcher (R): How then would the people having that kind of access or that kind of training affect your functions here, like if more people in the external agencies had that kind of supervisory access? **Interviewee (I):** It will lessen the number of persons calling for whatever extra information that they would need. Obviously, it would now take out from the regular day where I could set out, "This is my timetable for the day. This is what I am working on," and then you get ten calls asking for information. **(TECU Interview 2)** **Researcher (R):** Can you see the possibilities for the system or possibilities for your job if the law were to change or things happened outside of the law that could make it easier or different or just generally change up some of the functions? **Interviewee(I):** I think now we are talking about it, yes, they could talk -- the two systems could talk -- but them still needing that human element to perform this task of "This is the information," and then somebody saying, "Yes, we acknowledge that we have received this," then we could proceed. Without that, it can't be. **(TECU Interview 2)**

		“Usually if it is that we realize this court matter is coming up and we did not send through the information, this is how we know for sure that they could see exactly what we are seeing, because they contact us now, "This person is supposed to have a court date on this date at this time and we have no documents. Can you please forward them." **(TECU Interview 2)** 541 handheld devices on the system across all agencies **(Field Notes from TECU Observation 1)** UTurn pulls license and vehicle information from the Transport Division database. Transport Division is in the process of digitizing their database and identifying errors that existed from the pre-digitization period. **(Field Notes from TECU Observation 2)** **FN2Pic2** (Digital Court Order sent to the TECU after a decision has been made in a contestation)

		Motorist submitted a foreign permit for a stop. Staff member being observed checked TIPS (Transport Integrated Permit System) to see if the customer has a local permit, however motorist did not. Some motorists submit foreign permits as a means of trying to defraud the system. **(Field Notes from TECU Observation 4)** FNPic25 (Certificate of speed measurement issued by the Police Radar Device)
	4.2 Compliance and legal oversight *The UTurn and all its processes are governed by the Motor Vehicles and Road Traffic Act (Chapter 48:50). The UTurn must adhere to applicable laws, regulations, standards, and ethical guidelines. Compliance*	"We would generate the Notice of Intended Disqualification, because the law states that we can't disqualify without having notified, and we can't disqualify, in furtherance of that, without having the Transport Commissioner indicate reasons why the person is disqualified." **(TECU Interview 1)** "I explain that to people all the time. They are like, "Okay, so why does it have the demerit points?" I am like, "Okay, you have a fine for breaking the law. The demerit points are supposed to help you to watch your behavior. This is the law, and you have broken the law. Render unto Caesar that which is Caesar's. You want to keep collecting demerit points? Okay, it comes at a consequence." And I realize that our people are not particularly fond of consequences." **(TECU Interview 1)**

	and legal oversight help promote lawful and ethical operations.	**Researcher (R):** So, is it like a duplicate process, preparing the case files, even though they also have the information? **Interviewee (I):** Basically, yes, just because a person has to tell them, an actual physical person has to tell them this is the information. **R:** And so, you as a person have to speak to another person? **I:** Correct. **R:** So, your email does not go to a random place, it goes to another person? **I:** Directly to another person. **R:** Who then has to say, "I acknowledge receipt"? **I:** Correct. **(TECU Interview 3)** Also of note is the continued referral to the Act (legislation that guides the use of the UTurn system) to ensure that whatever decisions are made continue to be within the law. There is a triangulation in decision making, relying on the system generated information, reference to the law and departmental practices to ensure that there is as much cohesion in the decision making as possible.

		(Field Notes Summary from TECU Observation 1) Sanction letters are automatically generated by the system however the system has a technical error which requires human intervention. As the law is currently constituted, if the system sends the letter without properly notifying the citizen of their infraction, it runs counter to the law and as such becomes unconstitutional and unenforceable. **(Field Notes from TECU Observation 1)** The issue of corruption in the organization and the wider society continues to be a major issue of concern. Additionally, there is the challenge of navigating the interpersonal dynamics around user error. Because this system is directly aimed at reducing inefficiency as well as addressing corrupt practices, there are several points of tension. **(Field Notes Summary from TECU Observation 2)** This staff member noted that only the Transport Commissioner can disqualify a person from having a license, a point that the TC himself made in his own

		assessment of the way in which the legislation and use of the system has made his job more administrative **(Field Notes Summary from TECU Observation 3)** The law has been tested around how notifications should take place before disqualification, so some drivers are avoiding signing for documents to avoid receipt. In the future, push notifications could be explored as a means of alerting drivers as to their disqualification status. **(Field Notes from TECU Observation 3)** The law is reflected in almost every correspondence with the public. **(Field Notes from TECU Observation 3)** The law currently says that anything submitted to the Judiciary must be in writing, therefore all the information produced by the system must be downloaded by the TECU staff and sent to a corresponding staff at the Judiciary. The UTurn system and the Judiciary's court management system can communicate on some levels, for example, when a ticket is contested the algorithm then selects a date and a court for

		appearance and that information is registered in the UTurn system immediately. Similarly, if a driver decides to pay for a ticket even after signalling an intention to contest, the information is recorded in both systems however, the law mandates that any information submitted to the Judiciary must be done by a person. As a result, the system generated files still need to be emailed to the relevant parties. **(Field Notes Summary from TECU Observation 4)** **FN4Pic12** (Summary sheet of information sent to the Judiciary and issuing agency. The creation of supporting documents for this process are currently mandated by the law)

Appendix D Data Analysis (Transport Officers Fieldwork)

MAIN THEMES	SUB-THEMES	QUOTES
1. Reconfiguration of the interaction with the public *The use of UTurn reconfigures the relation with the public. The differences in power and desired outcomes, create situations where one party leverages authority over another, potentially leading to dissent)*	**1.1. Tensions related to privacy/power** *The security and use of data is a subject of concern to all parties involved in the UTurn process*	[People started accusing us: "Why all you want to do that? You are trying to find out where I am living." "All you want to deal with the property tax." "No, ma'am." We said, "What happens is, we do that because people apply for their license under false pretense, in terms of applying for their driver's license and the address they have is not where they are at, they are somewhere else."] (UTurn Field Officer, Ethnographic Interview #1 Feb 9, 2024) “Jason, they call us white shirts. Even in all the WhatsApp groups, they talk about be on the look out for the white shirts. They don’t know we are in the WhatsApp groups as well, so we know when they send out a message (Ethnographic Interview #2 Feb 9, 2024)

	1.2. Tension related to legitimacy of authority *(The introduction of technology into practices amplifies the perception of authority in interactions with the public)*	<u>Videorecording 2 (Road Exercise: Maracas Feb 9, 2024)</u> 00:01-02:00 All vehicles stopped by officers along North Coast Road, moving in both directions. Traffic is busy at this time due to visitors in the country for Carnival celebrations. (Maracas Bay is the nation's most popular beach.) 03:45-5:00 Driver told to exit vehicle. Checks to be conducted on his license. After checking the system, it was determined that this driver had 23 demerit points and was issued an "intention to suspend" letter at the site. It was also noted he was stopped for driving without a seatbelt, for which he had 2 of the same charges previously. 10:35-11:06 LO engages the driver of a panel van and returns insurance certificate and Driver's Permit 11 :37-13 :58 Officers of the various units on duty – TTPS, TECU, Army and Transport Division – engage several drivers and check documents 18 :00-19 :00 UTurn has verified the driver's license should be suspended (same driver identified at 3:45 mark). The official "Intention to suspend" document is printed by (redacted) and given to the LO, who presents it to the driver.

		Generally, we try to be polite, and we follow the law. We also let motorists know that if they feel they have been wrongfully charged, there is a process by which they could contest the tickets. (Ethnographic Interview #1 Feb 9, 2024) "We don't always give out all the tickets we could, we understand that the times might be hard, but some people really overdo it. The attitude we get when we stop a driver has a lot to do with how many tickets we might issue." "We might give a ticket for an inspection sticker, but then the driver might have a broken light, or they might have a window that isn't working. All of those things are a charge, but we will not necessarily give a ticket for all of them if the driver cooperates." (Licensing Officer, Ethnographic Interview #2 Feb 9,2024) "There was a lady I ended up giving about 9 demerit points. She wants to argue about an issue and her husband was keeping quiet. He knew she was wrong, but she kept arguing, she could have saved herself a lot of aggravation, but she wanted to be difficult." (Licensing Officer, Ethnographic Interview #2 Feb 9, 2024)

		A car with a driver with no seatbelt is on the opposite lane and (redacted) turns on the siren alerting the driver to pull over. The driver tried to put the car in reverse but both (redacted) and Bobby jump out of our vehicle. The trailing Licensing Vehicle also pulls over to block the car from escaping. The car is now surrounded by 4 officers while the driver of the stopped vehicle tries to put on his seatbelt. (Field notes Feb 9, 2024) Heard from the back of the Licensing Vehicle: "You didn't see me trying to stop you? Why did you try to drive off?" (Field notes, Maracas Exercise, Feb 9, 2024) Bobby to me: "They overdoing it. No license, no insurance, no inspection sticker, he bought a car from somebody and has no transfer documents (obscene language). I had to give him a kite tail. Drivers like that must go from not having a license to not being able to get a license so I gave him enough tickets and demerit points to have his license suspended immediately. Easy about a 4 or 5 thousand dollars in penalties, could be more. They are driving on the road and

		endangering people's lives." (Licensing Officer, Ethnographic Interview #2, Feb 9, 2024) There is a sense of resistance, in terms of, "What you stopping me for?" "We stopped you because you are creating a traffic offence, which is an illegal offence." So, when they behave like that, you have what you call the force continuum, the level of force. So, you start off at a level 2, 3 -- polite but firm -- and then they want to take it two stages up, and then now the officers will have to take it just one above that level to have that common presence and control (UTurn Field Officer, Ethnographic Interview #1, Feb 9, 2024) "Well as you know, this was a joint exercise with the Barrackpore Police Station. So, they will request officers from TC (the Transport Commissioner) and then we will come down. They will let us know where is the best place to set up and we will take it from there. And as you heard the officer say, they not accustomed with Licensing Officers in the back here, they keep getting away with foolishness. You didn't see how many violations that first car we stopped had?

		They don't think Licensing will come down here. » (Licensing Officer, Ethnographic Interview #3, Oct 11, 2023) "Well, some motorists bring in their cars in pieces and then reassemble them once they get here. It is a way that people have used in the past to get around paying the customs duty, so that is why I asked him to open up his engine and remove some parts so that I could see the VIN. Thing is we have been doing this for a while, so most drivers don't know that there are some inconsistencies. For instance, a particular year in that model car would not have those types of seats, even though they work hard to cover up the fraud, these are things that we know." (Licensing Officer, Ethnographic Interview #3 Oct 11, 2023) "Generally, we try to be polite, and we follow the law. We also let motorists know that if they feel they have been wrongfully charged, there is a process by which they could contest the tickets." (Licensing Officer, Ethnographic Interview #3 Oct 11, 2023)

		Several tickets were issued that day and the responses by motorists were varied, from acceptance to outrage. The outrage did not speak to legality but rather to what motorists felt should be more empathy in the interaction. (Field notes, Oct 11, 2023) There was another incident where a young man sped past the stop and had to be chased in a van by one of the Licensing Officers and brought back to the checkpoint. Turns out the gentleman had lights that simulate police issued lights which are clearly a problem. In a country where people with less that honorable intentions have impersonated the police, this is a problem. (Field notes, Oct 11, 2023) There is general resistance to roadblock exercises, they are perceived by many members of the public as intrusive and time wasting, but the frequency of ticketing suggests that there is still a lot of disregard for the rule of law. (Field notes Oct 11, 2023)

2. Reconfiguration of the workspace to support monitoring and control in real-time *The UTurn system allows for distributed decision making and remote support. This means that different departments need to synchronize with each other to ensure outcomes*.	**2.1. Real-time monitoring and control** *Officers in the field regularly consult with the TECU staff for real-time support*	<u>Videorecording 1 (Road Exercise: Maracas)</u> 00:30-01:37 (redacted) communicates with TECU to get further background information on the motorist. 04:18-5:32 (redacted) and Bobby confer on the status of a motorist's driving record. 00:30-01:37 (redacted) communicates with TECU to get further background information on the motorist. 04:18-5:32 (redacted) and Bobby confer on the status of a motorist's driving record. (Feb 9, 2024) <u>Videorecording 2 (Road Exercise: Maracas)</u> 03:45-05:00 Driver told to exit vehicle. Checks to be conducted on his license. After checking the system, it was determined that this driver had 23 demerit points and was issued an "intention to suspend" letter at the site. It was also noted he was stopped for driving without a seatbelt, for which he had 2 of the same charges previously

		14 :02-16 :50 LO takes photos of tires and number plate. Generates and issues tickets. [in discussion with (redacted) prior to leaving the headquarters, there was a conversation about how long the operation should be. While neither dictates duties to each other, while Licensing Officers are in the field, there is a support person in Head Office monitoring the data in real time as it comes in. That person can run additional checks to ensure there is congruence with the information being collected in the field. These are the kinds of checks and balances that ensure that the information is as accurate as possible.] (Fieldnotes, Oct 11, 2023) "We call the Traffic Enforcement Center Unit, we give them the driver's permit, they concur with the name on the permit and they do up the documents, process it, and email it to my email and from there I print it and an officer will issue the documents to them, whether it is an intent for disqualification or giving a disqualification notice." (UTurn Field Officer, Ethnographic Interview #1, Feb 9, 2024)

		We did a few road checks well, testing the system. It was successful in terms of when we get these people with the high points -- ten points and above -- what we do, we call the Traffic Enforcement Center Unit, we give them the driver's permit, they concur with the name on the permit and they do up the documents, process it, and email it to my email and from there I print it and an officer will issue the documents to them, whether it is an intent for disqualification or giving a disqualification notice. (UTurn Field Officer, Ethnographic Interview #1) Liaising with TECU, in terms of on-the-road operations, you might meet some people and when you check, they have points, but they will tell you, "I have been served already. I have 14 days in which to..." "All right. Cool, no problem, but let me confirm." I will call TECU office. And liaise with them to confirm whether this person with this driver's license number so, so, so, so, "I just want to confirm that they were ever served or what," and they will treat with it. They will call me back, "Mr. (redacted), hear what is going on. That person has been served. You could release him because..." (UTurn Field Officer, Ethnographic Interview #1)

		In conversation with (redacted) at the end of the day he affirmed that his job is because of the UTurn system and there is no separation of tasks, he is the on-field expression of the system. (Field notes, Oct 11, 2023)
	2.2 Synchronization of shift-time *The road exercises are often outside the confines of 'regular' work hours. It requires the coordination of time by the different departments*	Once you have a road exercise, let's say like at 8:00 p.m. to let's say about midnight, what the TECU coordinator does, through the Transport Commissioner, is organize for -- once we know ahead, we know we could pull staff to work those hours during that period. Take them off; they wouldn't come to work today, and they will come to work the next day, but come for that time and work within those hours. (UTurn Field Officer, Ethnographic Interview #1)
	2.3. Dislocated workspace *The UTurn field officer has an office with access to the system that allows for issuance of legal notifications*	<u>Video recording 1 (Road Exercise: Maracas)</u> 03:01-03:34 (redacted) confers with the TECU to verify information about a driver's demerit point status and whether he has been notified 06:14-07:20 (redacted) is verifying information both with walkie-talkie and access to the system. (Feb 9, 2024)

	and background checks in the field	Videorecording 2 (Road Exercise: Maracas) 07:40-08:40 Driver told to check lights. (redacted) does verification of DP on wireless mobile system. No apparent issues and the driver is sent away 16:50-17:20 LO confers with (redacted) about the status of a driver. Through the Commissioner going on the road and we are checking the drivers and the drivers' licenses, we realized the high points they had on their licenses, and then what we did, we had to line them up and bring them back to the office here to be served. We realized, you know what, it is taking up too much time. So, the boss came up with the idea, you know what: Laptops, printers, a wireless device and connected into the system (UTurn Field Officer, Ethnographic Interview #1) (redacted) functioned as the UTurn representative in the field, which meant him having the equivalent of a mobile office: a laptop, modem and a printer set up in the back of a van. During road stops, once a driver had been pulled over,

		(redacted) would approach the motorists and ask them for their license (Field notes, Oct 11, 2023) A gentleman with 14 demerit points was issued an "Intent to Disqualify" which meant he had 14 days from the issuance of the letter (printed in the field) to respond in writing to the Commissioner why he thinks he should not be disqualified (Field notes Oct 11, 2023)
3. Interweaving and recursive use of AI-driven system to support decision-making *The UTurn system is integral to the execution of the Licensing Officer's tasks in the field, and their practices are intertwined with the technology*	**3.1. Access to real-time information to support decision-making** *Decisions are supported by current information that is available at the time of decision-making*	Videorecording 1 (Road Exercise: Maracas) 04:18-05:32 (redacted) and Bobby confer on the status of a motorist's driving record. 05:50-06:13 Tickets are being dispensed to motorists. The issuing of tickets is enacted through the UTurn system (Feb 9th, 2024) Where things started to change, in terms of, "Something is wrong with this vehicle, you know." So, I do the audit, access to the VMS system, which I do, and then we tap into it and when we check we realize, you know, right vehicle,

		wrong color, or right number plate, wrong type of vehicle. (UTurn Field Officer, Ethnographic Interview #1 Feb 9, 2024) So, with the new system that they have now called the UTurn system, it makes it a whole lot easier now to find. (UTurn Field Officer, Ethnographic Interview #1 Feb 9, 2024) (redacted): "You didn't see me trying to stop you? Why did you try to drive off?" Driver: I didn't try to drive off. Bobby: So, we lying on you? Let me see your license!" Driver: "I left it at home" (redacted) gets his laptop: "What is your name and date of birth?" (redacted): "Your license expired since 2018" (Field notes, Maracas Exercise, Feb 9, 2024) "Jason, you enjoyed it? We will leave the system connected until we get back to Caroni (the Head Office). let's drive back to the office with no sirens on, and stay

		in traffic like regular people, we will see who we catch on the road" (Field notes Feb 9, 2024) "And by using those apps, more or less you more use it for the driver's license to check for points. Once we access that, like just now there with the driver, I accessed his driver's permit -- his permit number and his date of birth. All the information came up on it that he has Class 3 for light motor vehicle, he has class 4 for a heavy motor vehicle, and I go into if he has ever been issued tickets or notices for demerit points." (UTurn Field Officer, Ethnographic Interview #1 Feb 9, 2024) "To be honest it makes everything easier. I could pull up whatever the charge is and then issue it accordingly." (Licensing Officer, Ethnographic Interview #3 Oct 11, 2023)
	3.2. Provide data to inform the system	<u>Videorecording 1 (Road Exercise: Maracas)</u> 03:50-04:17 LO takes pictures of the vehicle as a means of building a case file in the event the information is contested.

	The UTurn has audio, video and document capabilities that become evidence should there be a legal challenge to a ticket. Because the system is also integrated to the Judiciary, this evidence is immediately available to the Court	<u>Videorecording 2 (Road Exercise: Maracas)</u> 14 :02-16 :50 LO takes photos of tires and number plate. Generates and issues tickets. 19:00-22:00 Driver signs the official document notifying him that his license will be suspended for exceeding the demerit points. He is notified he can petition the Transport Commissioner for consideration. [For instance, if somebody says they have a license, but they don't have it on them: "So where is your license? "Home." "Is there anybody home you could access to send a picture of it to you, that we can confirm that you have a driver's license?" "No." All right, on the system now that I have access to, I want your name, your full name, your date of birth. I pull it up on the system. If it shows up as a "not found," it is because you were never issued a license. And with further interrogation, people confess that, no, they were never issued] (UTurn Field Officer, Ethnographic Interview #1 Feb 9, 2024)

		“So, if somebody gets a ticket for not wearing a seat belt, they are paying the ticket -- they contest the ticket, they go to court -- and then there now, when they contest the ticket, they have to give reasons why. And from that now, the officers now will have that document showing the reason why they contest the ticket. And if they are saying that they were wearing the seat belt, then you have officers now who were around who saw. So, when the officers doing up their summary to submit to the court for the court date, the officer will add the witnesses to the document for the court.” (UTurn Field Officer, Ethnographic Interview #1 Feb 9, 2024) From one, let's say we set up a roadblock just down the road, but there is a street coming, but there is a sign saying no entry between these hours, let us say between 6:00 a.m. and 9:00 a.m. But you see that person come across there now, and when you pull them over, "But I come from so," but we know you come from there. We go across now and we take a pic of the street sign that was posted and add it to their comments on the device. So, whenever they decide to contest, all those things are submitted to the court. (UTurn Field Officer,

		Ethnographic Interview #1 Feb 9, 2024) "When the officers doing up their summary to submit to the court for the court date, the officer will add the witnesses to the document for the court… and then you do up that and submit the documents to the Prosecutor in the court. All those documents will go to the court and when it is time for the court -- well, they still have it virtual, so here now, everybody will be here. With the court matter now, the person who did the charging, the officer who did the charging and the witnesses will be here. (UTurn Field Officer, Ethnographic Interview Feb 9, 2024) I noted one officer used the device consistently for both picture and video when issuing tickets. Because every issuing of a ticket can be contested, it is important to retain as much evidence as possible at the traffic stop. (Field notes, Oct 11, 2023)
	3.3 Access to interconnected systems	So, with that now, I have access to the system within Licensing, apart from dealing with the TECU aspect of things. I can check the VMS system, the

	Transport Officers can now connect with multiple systems while in the field that allows them to make better decisions)	Vehicle Management System, to see who the vehicle registered to that you are driving. (UTurn Field Officer, Ethnographic Interview #1 Feb 9, 2024)

Appendix E Example of Field Notes Summary (Reflexive Memo)

Observation of Licensing Officers in the Field (Joint Exercise with the Barrackpore Police Station and the Transport Division)

No of people directly observed: 15 (9 Transport Officers/6 Police Officers)

Date: Wednesday 11th October 2023

Time: 12:00 pm – 8:00 pm

Planned agenda:

Observation of the Licensing Officers as they use the UTurn system in the field with motorists.

As the final stage of observation of the user process, the focus for this day is to see how the Licensing Officers interact with the technology as they execute their tasks. This will also be the first time seeing the technology being used in real time with the public.

General Context/Overview:

Exhilarating. Not the most academic term but it is certainly the most appropriate to describe the context. The Barrackpore Police Station is in Southern Trinidad, which on a normal day from the Transport Division Headquarters would take an hour given the normal flow of traffic. This trip took less than half that time travelling in official state vehicles. As a joint exercise, the services of the Transport Division were requested by the Barrackpore Police Service because they wanted to address some perceived lawlessness on the roads in that jurisdiction. Licensing Officers are not precepted (carry firearms) so there in many instances there must be police presence in the event of any untoward activity.
The Licensing Officers set up operations on what is the most traversed street in that district and proceeded to engage the motoring public for 4 hours.

Observation of Licensing Officers

Because of all the elements of this observation, it may be best to record these are short chapters.

The Introductions

My contact with the Licensing Officers was (redacted) (redacted) (called (redacted) for short, clearly deliberate). (redacted) introduced himself as a person who now works with the Licensing Office. He introduced me to the rest of the staff as an observer that would be on the field with them for the exercise. The first thing I noted was that a licensing officer put on something that looked like a bullet proof vest. In the meeting area, there was discussion about what vehicles they would use, and a few officers approached to ask what my purpose would be, what would I be looking for. There was initial suspicion but eventually over the course of the evening, that would dissipate.

The Drive

The drive to the site was done in official Licensing Vehicles, which prior to this trip, I had no knowledge about. Being official state vehicles, they did not need to sit in traffic, so we covered the entire journey with sirens blaring and travelling at 50 km over the speed limit. Horns blared to let drivers know to move out of the way. What is interesting about this experience is that under different circumstances, a person driving this quickly and using their cellphones would qualify for at least 6 demerit points. The journey took at least half the time it would have taken a regular driver. The drive also allowed me to question the Officers on their practices, one of the questions being how much has using the technology in the field helped, to which the officer responded significantly. There is no version of their job now that exists without the UTurn system, both legislatively and practically.

The Police Station

The genesis of this exercise started with a request from the Barrackpore Police force. I observed only one member of the police team with a ticketing device, suggesting that there might not currently be the full complement of officers in this station with access. As observed during my time in TECU, there are over 2000 users on the system. The officer in charge of the exercise noted that they have been having some traffic issues with people parking illegally and creating congestion around some main thoroughfares. Part of the initial discussion was determining where would be the best place to set up. After some deliberation, they team went to the school but that was a short stint, logistically and politically (officers felt the backlash would be significant) it was determined to not be the most expeditious use of time. It was also felt that because of where Barrackpore is, Licensing Officers are not frequently seen and so it would catch errant drivers by surprise as well establish a presence in the south land.

At the police station, I once again explained my purpose on site and was questioned about how much information I had divulged to the wider public. These exercises are meant to be surprises so foreknowledge is usually very carefully guarded.

The First Stop

It became very apparent on the first stop that there would be no room for picture taking and questioning while the exercise was ongoing. The pace is very high intensity, and the information is sensitive. All the information therefore is based on observation. A young driver was the first person ticketed and unfortunately had made many modifications to his vehicle. What was significant about this stop, was a discussion with the officers about how to record the ticket. The young man had a number plate that was improperly attached and there didn't seem to be a charge that says improperly attached, HOWEVER, there is a charge that says defective number plate. In their collaboration with each other they determined that the way to handle that situation was to a) take a picture and b) put comments in the device so that when the ticket is printed and shows up in the UTurn system, there is evidence in the event the ticket is contested. In that one stop, which grace was extended, the young man left with two tickets that were printed on the spot as well as he had to remove all the problematic issues with the car before he could move.

(redacted) in the Field

(redacted) functioned as the UTurn representative in the field, which meant him having the equivalent of a mobile office: a laptop, modem and a printer set up in the back of a van. During road stops, once a driver had been pulled over, (redacted) would approach the motorists and ask them for their license. He would then run their information through the system to see if they had any demerit points. At one point he approached me and said "Jack ((redacted) couldn't be bothered to learn my name), we got one!" A gentleman with 14 demerit points was issued an "Intent to Disqualify" which meant he had 14 days from the issuance of the letter (printed in the field) to respond in writing to the Commissioner why he thinks he should not be disqualified.

There was one more person issued with an intent to disqualify during the exercise, and he too was presented with a letter printed on the field and advised of his rights going forward. There were several more of these types of checks and motorists were warned that they were nearing their threshold. In conversation with (redacted) at the end of the day he affirmed that his job is because of the UTurn system and there is no separation of tasks, he is the on-field expression of the system.

In discussion with (redacted) prior to leaving the headquarters, there was a conversation about how long the operation should be. While neither dictates duties to each other, while Licensing Officers are in the field, there is a support person in Head Office monitoring the data in real time as it comes in. That person can run additional checks to ensure there is congruence with the information being collected in the field. These are the kinds of checks and balances that ensure that the information is as accurate as possible.

Other Traffic Stops

Several tickets were issued that day and the responses by motorists were varied, from acceptance to outrage. The outrage did not speak to legality but rather to what motorists felt should be more empathy in the interaction. I noted one officer used the device consistently for both picture and video when issuing tickets. Because every issuing of a ticket can be contested, it is important to retain as much evidence as possible at the traffic stop.

There was another incident where a young man sped past the stop and had to be chased in a van by one of the Licensing Officers and brought back to the checkpoint. Turns out the gentleman had lights that simulate police issued lights which are clearly a problem. In a country where people with less that honorable intentions have impersonated the police, this is a problem. When the gentleman was eventually apprehended, he had removed the lights from his dashboard, but he had already been spotted, and the lights were found in his vehicle. He initially argued that the lights were white and as such would not be mistaken for the police but once the LO made him cycle through the different colours, the blue police lights showed up. After enquiring whether he had legitimate reason to own these lights, it was determined that he did not, and a ticket was issued. There was another one of those types of stops on the exercise.

While on site there was a call that the officers apprehended a vehicle transporting marijuana which was also a highlight of the day. There is general resistance to roadblock exercises, they are perceived by many members of the public as intrusive and time wasting, but the frequency of ticketing suggests that there is still a lot of lawlessness.

Analysis

The idea of triangulation between the law, technology and the humans required to make the entire system work is clear in these interactions once again. The initial discussion around sociomateriality for me, revolved around the use of technology as the main non-sentient actor in the decision-making process, it is clearer to me at this point that the law is an equal partner and must be equally considered. The law as an actor, filters from the policy level straight down to the microsocial. At ever observed phase of this process, all the actors continually refer to the law, even when there is significant reliance on the technology. No decisions are made without acknowledging or consulting the law. Interactions with the public who are found errant usually go “according to (cite law) …”.

The microsocial practices are a direct reflection of the policy positions taken at senior and governmental levels and while it may not be the same in the private sector, it is a thing in the public sector. If my assessment of the situation is correct, there is also a correlation between the introduction of technology and job creation. Not only has the entire TECU been created but also other spin-offs (rehabilitation classes, provision of devices, new jobs). There isn’t yet a baseline to compare pre and post UTurn, but based on conversations had with the officers, it seems to have inspired confidence in the way they execute their jobs. There is less room for human error and the speed at which they can do their job is significantly increased. I think the TC said from 8 minutes down to 2-3 minutes, something I witnessed. The longest part of the process is explaining why the ticket is being issued but the actual issuing of the ticket is done in short order.

The human element in the field is still very important in this process and probably will remain unchanged until the implementation of the red-light camera system. What is also becoming apparent to me is that at this stage, in this context, AI will not replace jobs, it will however replace job functions, which may eventually lead to a new kind of employee, certainly a new skill set, and a new way of understanding and approaching work.

Collaboration is a prominent feature of the practices at all levels of this process. From the inception to the end, there have been cross-functional teams helping with the creating and implementation and operationalization of the technology.

Appendix F Example of Video Ethnography

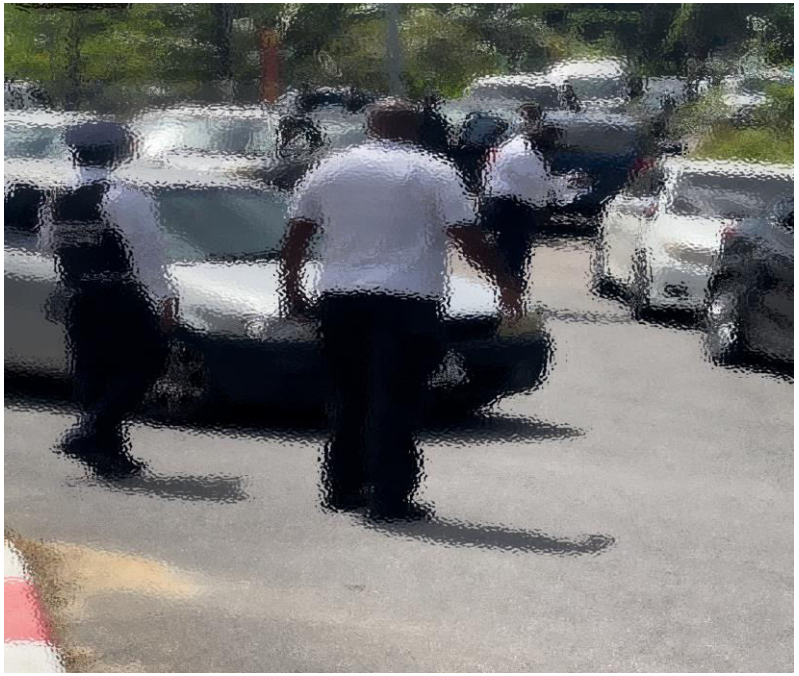
MARACAS BAY, NORTH COAST ROAD

FEBRUARY 9, 2024

Present are Transport Officers (Transport Division), Trinidad and Tobago Police Service (TTPS), Trinidad & Tobago Regiment (Army) and (redacted) F. Personal Assistant to the Transport Commissioner and Traffic Enforcement Centre Unit (TECU) Liaison

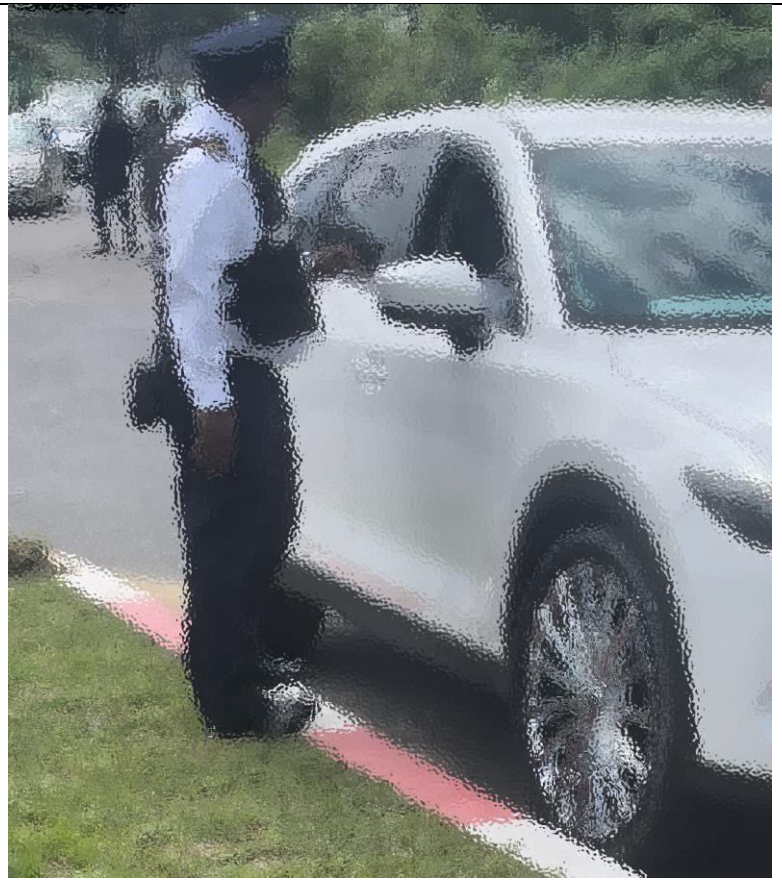
TIME	ACTIVITY	SCREENSHOT
0:01 – 02:00	All vehicles stopped by officers along North Coast Road, moving in both directions.	

	Traffic is busy at this time due to visitors in the country for Carnival celebrations. (Maracas Bay and the North Coast also have popular beaches.)	

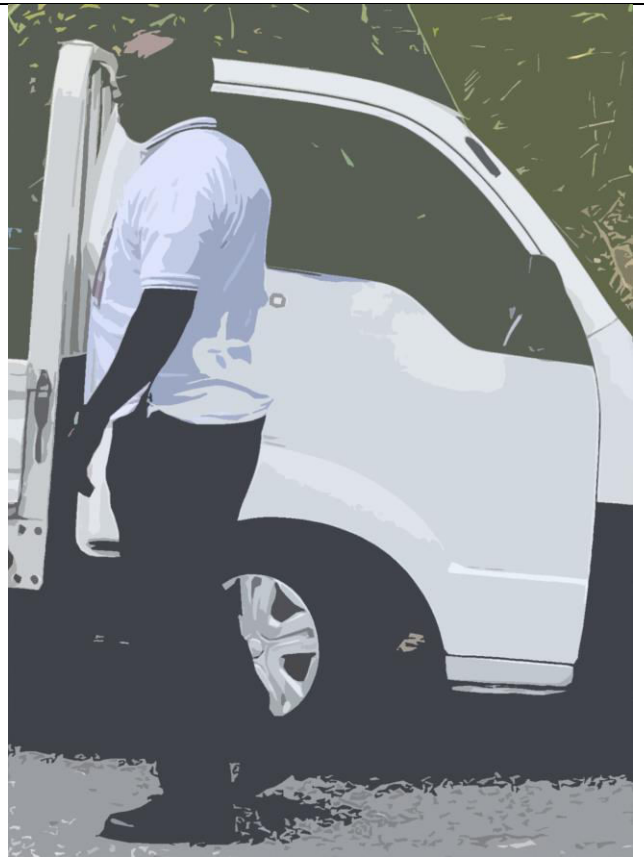
03:00 – 03:45	Station wagon directed to pull to the side of the road for further inspection and verification. (redacted) and TTPS officer engaged. Other officers are engaged with drivers who have been stopped.	

03:45- 05:00	Driver told to exit vehicle. Checks to be conducted on his license. After checking the system, it was determined that this driver had 23 demerit points and was issued an “intention to suspend” letter at the site. It was also noted he was stopped for driving without a seatbelt, for which he had 2 of the same charges previously	

05:00- 06:35	Driver directed to pull to the side by LO	

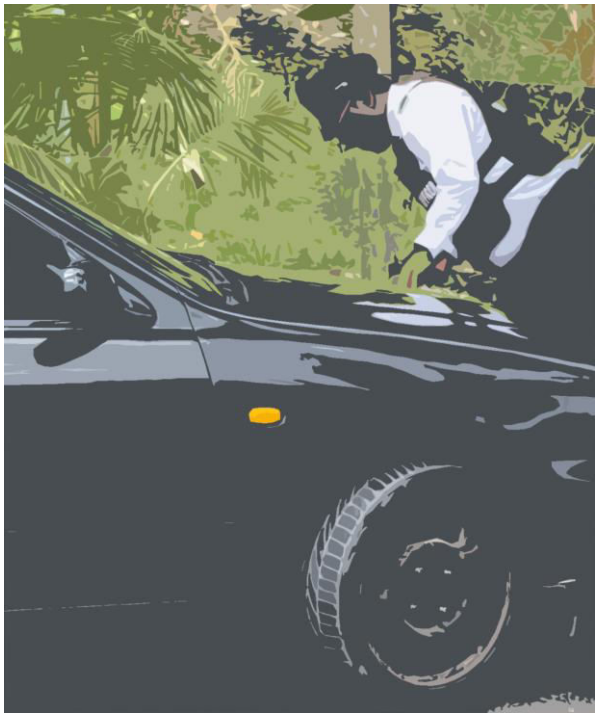
06:40- 07:35	LO identifies himself to the driver by means of showing driver his official identification	

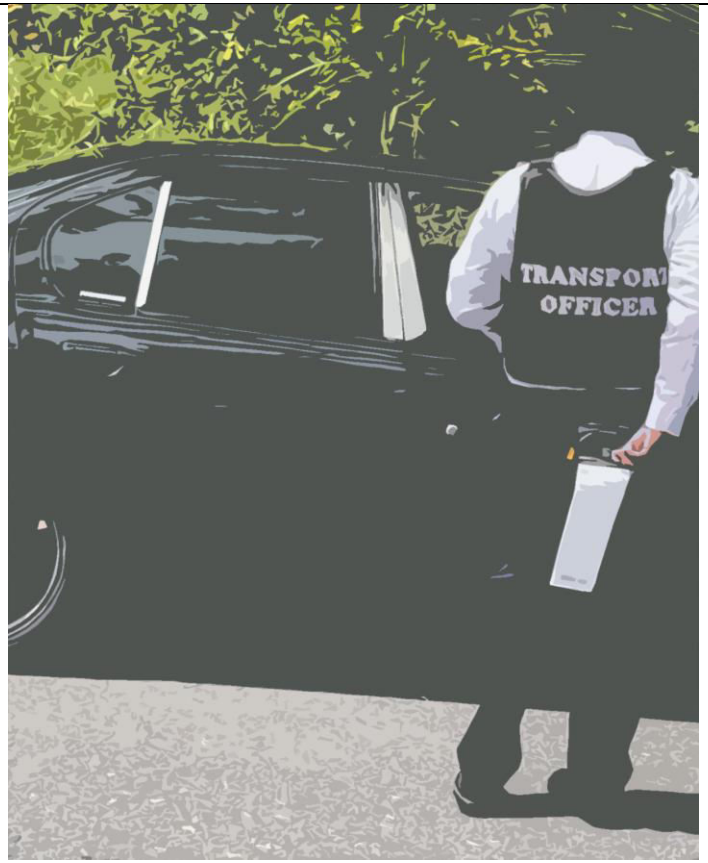
07:40 – 08:40	Driver told to check lights. Officer does verification of DP on wireless mobile system. No apparent issues and the driver is sent away.	

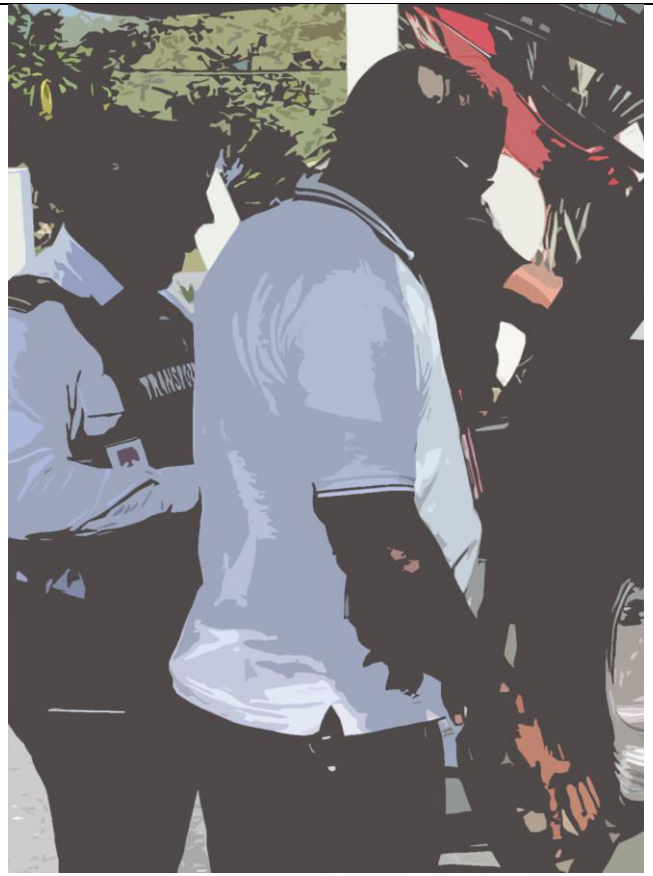
9:45 – 10:30	Insurance Certificate and DP visually checked by Officer. Driver allowed to leave.	

10:35 – 11:06	LO engages the driver of a panel van and returns insurance certificate and DP.	

11:37 – 13:58	Officers of the various units on duty – TTPS, TECU, Army and Transport Division – engage several drivers and check documents.	

14:02 – 16:50	Transport Officer takes photos of tires and number plate. Generates and issues tickets.	

		 TRANSPORT OFFICER

16:50- 17:20	Transport Officers confers with (redacted) about the status of a driver	

18:00 – 19:00	UTurn has verified the driver's license should be suspended (same driver identified at 3:45 mark). The official "Intention to suspend" document is printed by (redacted) and given to the LO, who presents it to the driver	

19:00- 22:00	Driver signs the official document notifying him that his license will be suspended for exceeding the demerit points. He is notified he can petition the Transport Commissioner for consideration	

Appendix G Samples of the Law

(3) A person who is disqualified from holding or obtaining a driving permit may be reissued with a driving permit by the Licensing Authority where he—

(a) participates in a driver's rehabilitation programme approved by the Licensing Authority;

(b) passes a driving test; and

(c) pays the prescribed fee for the reissue of the driving permit.

(2) Where a person who holds a driving permit for more than twelve months, accumulates within a period of three years—

(a) ten or more but less than fourteen demerit points, the Licensing Authority shall disqualify that person from holding or obtaining a driving permit for a period of six months;

(b) fourteen or more but less than twenty demerit points, the Licensing Authority shall disqualify that person from holding or obtaining a driving permit for a period of one year; or

(c) twenty or more demerit points, the Licensing Authority shall disqualify that person from holding or obtaining a driving permit for a period of two years.

(3) The Licensing Authority shall, before disqualifying a person under subsection (2), give that person notice in writing of its intention to do so, and shall specify a date not less than fourteen days after the date of the notice, upon which the suspension shall be made and call upon the person to show cause why he should not be disqualified.

(2) Where a person who holds a driving permit for more than twelve months, accumulates within a period of three years—

(a) ten or more but less than fourteen demerit points, the Licensing Authority shall disqualify that person from holding or obtaining a driving permit for a period of six months;

(b) fourteen or more but less than twenty demerit points, the Licensing Authority shall disqualify that person from holding or obtaining a driving permit for a period of one year; or

(c) twenty or more demerit points, the Licensing Authority shall disqualify that person from holding or obtaining a driving permit for a period of two years.

(3) The Licensing Authority shall, before disqualifying a person under subsection (2), give that person notice in writing of its intention to do so, and shall specify a date not less than fourteen days after the date of the notice, upon which the suspension shall be made and call upon the person to show cause why he should not be disqualified.

Appendix H Ethics Approval Certificate

Université d'Ottawa
Bureau d'éthique et d'intégrité de la recherche

University of Ottawa
Office of Research Ethics and Integrity

S-07-23-9280 - REG-9280 - Certificat d'approbation éthique / Certificate of Ethics Approval

(English message follows)

Cher/Chère Jason Leach,

Veuillez trouver ci-joint le certificat d'approbation éthique pour le projet intitulé «The Agency of Artificial Intelligence in microsocial decision making in the Ministry of Works and Transport in Trinidad & Tobago: An analysis of the User-AI interaction in the U-Turn System».

Le certificat est valide jusqu'au : 30-07-2024

Note: In the consent form for photo elicitation, in the paragraph on "Purpose of the study", the last sentence is instructions on how to write the paragraph and therefore this sentence should be removed before the form is used with participants.

Recherche financée : veuillez faire suivre une copie du certificat au Service de gestion de la recherche.

Si vous avez des questions, n'hésitez pas à communiquer avec le Bureau d'éthique à ethique@uottawa.ca ou en composant le 613-562-5387.

Vous pouvez voir votre demande en vous connectant à votre compte eReviews.

Cordialement,

Riana Marcotte
Responsable d'éthique en recherche

Ceci est une réponse automatisée, merci de ne pas répondre à ce courriel.

Dear Jason Leach,

Please find attached the certificate of ethics approval for your research project titled "The Agency of Artificial Intelligence in microsocial decision making in the Ministry of Works and Transport in Trinidad & Tobago: An analysis of the User-AI interaction in the U-Turn System".

This certificate is valid until: 30-07-2024

Note: In the consent form for photo elicitation, in the paragraph on "Purpose of the study", the last sentence is instructions on how to write the paragraph and therefore this sentence should be removed before the form is used with participants.

Funded research: A reminder that you must provide a copy of this certificate to Research Management Services.

If you have any questions, please contact the Ethics Office at ethics@uottawa.ca or by telephone at 613-562-5387.

You can view your project at any time by logging into eReviews.

Best regards,

Riana Marcotte
Protocol Officer

550, rue Cumberland, pièce 154 Ottawa (Ontario) K1N 6N5 Canada
550 Cumberland Street, Room 154 Ottawa, Ontario K1N 6N5 Canada

613-562-5387 • 613-562-5338 • ethique@uOttawa.ca / ethics@uOttawa.ca
www.recherche.uottawa.ca/deontologie I www.recherche.uottawa.ca/ethics

Appendix I Interview Consent Document

Université d'Ottawa | University of Ottawa

Consent Form

Interviews

Title of the study:

The Agency of Artificial Intelligence in microsocial decision making in the Ministry of Works and Transport: An analysis of the User-AI interaction in U-Turn System

Researcher:
Department of Communication, Faculty of Arts
University of Ottawa
Email address:

Name of Supervisor:
Email:
Communications Department, Faculty of Arts, University of Ottawa

Invitation to Participate: I am invited to participate in the abovementioned research study conducted by Jason Leach, in the context of a PhD thesis, under the supervision of Professor Sylvie Grosjean.

Purpose of the Study: The purpose of the study is to examine how decision-making in your daily activities as well as your interactions have been influenced by the introduction of the new technology (U-Turn system)

Participation: My participation will consist of interviews. During the interview, I will be asked about my job, how I make decisions and how my job has changed since the introduction of new technology. There will be one (1) interview per participant that should last 45-60 minutes. It will be recorded, and a transcript generated. The transcript will be made available for the interviewee after the interview for review.

Risks: My participation in this study will entail that I discuss my job functions and work interactions, and this may cause me to feel some emotional discomfort. I have received assurance from the researchers that every effort will be made to minimize these risks. Interviewees can leave the interview at any time and choose not to answer any question that may feel uncomfortable. The identities of all interviewees will be protected, and all data will be stored securely, only to be accessed by the researcher.

Benefits: My participation in this study will contribute the improvement of operations at the Motor Vehicle Authority. It may also allow me to reflect on the way that I make decisions.

ormation I will share will remain
doctoral thesis at the University
be made to keep my information
lentifiable.

Conservation of Data: The data collected (list the data collected, both hard copy and electronic data; including audio recordings, transcripts, survey datasets, researchers' notes, consent forms, etc.) will be kept in a secure manner on an external

Department of Communication
Faculty of Arts
Desmarais
Room 11101
arts.uOttawa.ca
55 Laurier Avenue East
Ottawa ON K1N 6N5
Canada

uOttawa

Voluntary Participation: I am under no obligation to participate and if I choose to participate, I can withdraw from the study at any time and/or refuse to answer any questions, without suffering any negative consequences. If I choose to withdraw, all data gathered until the time of withdrawal will be removed from the dataset and not used in the study.

If I have any questions about the study, I may contact the researcher or their supervisor. If I have any questions regarding the ethical conduct of this study, I may contact the Office of Research Ethics and Integrity via email (ethics@uottawa.ca) or telephone (613-562-5387).

It is recommended that I (keep/print/save) a copy of this consent form for my records.

¨ I agree that anonymized quotes of my interview may be used for scientific publications/conferences.

¨ I consent to having my real name and position used for scientific publications/conferences

Acceptance: By signing my name below, I agree to participate in this research study.

Participant's name: _____ Date: _____
Participant's signature: _____ Date: _____
Researcher's signature: _____ Date: _____

Appendix J Observation Consent Document

Université d'Ottawa | University of Ottawa

Consent Form

Title of the study:

The Agency of Artificial Intelligence in microsocial decision making in the Ministry of Works and Transport: An analysis of the User-AI interaction in U-Turn System

Researcher:
Department of Communication, Faculty of Arts
University of Ottawa
Email address:

Name of Supervisor:
Email address:
Communications Department, Faculty of Arts, University of Ottawa

Department of Communication
Faculty of Arts
Desmarais

Room 11101

arts.uOttawa.ca

55 Laurier Avenue East
Ottawa ON K1N 6N5
Canada

Invitation to Participate: I am invited to participate in the abovementioned research study conducted by Jason Leach, PhD Candidate, University of Ottawa

Purpose of the Study: The purpose of the study is to examine how decision-making in your daily activities as well as your interactions have been influenced by the introduction of the new technology (U-Turn system)

Participation: My participation will consist of being observed. During the observation I may be recorded and asked about my job, how I make decisions and how my job has changed since the introduction of new technology. Participants will be observed during different activities in their workday and notes taken. Questions may be asked of me to explain certain elements of my job. Notes can be made available for the participant after the observation period for review. I may be asked to take pictures of elements of my job and have a discussion on them subsequently. Participants can be expected to be observed for a maximum of five (5) days.

Risks: My participation in this study will entail that I discuss my job functions and work interactions, and this may cause me to feel some emotional discomfort. I have received assurance from the researchers that every effort will be made to minimize these risks. Interviewees can leave the interview at any time and choose not to answer any question that may feel uncomfortable. The identities of all interviewees will be protected, and all data will be stored securely, only to be accessed by the researcher.

Benefits: My participation in this study will contribute the improvement of operations at the Motor Vehicle Authority. It may also allow me to reflect on the way that I make decisions.

Confidentiality and Privacy I have received assurance from the researchers that the information I will share will remain strictly confidential. I understand that the contents will be used only for the completion of a doctoral thesis at the University of Ottawa and that my identity will be protected.

Conservation of Data: The data collected (list the data collected, both hard copy and electronic data; including audio/video recordings, transcripts, survey datasets, researchers' notes, consent forms, etc.) will be kept in a secure manner on an external encrypted hard drive that only the principal researcher will have access to.

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ıte, I can withdraw from the study
nces. If I choose to withdraw, all
he study.

If I have any questions about the study, I may contact the researcher or their supervisor. If I have any questions regarding the ethical conduct of this study, I may contact the Office of Research Ethics and Integrity via email (ethics@uottawa.ca) or telephone (613 562 5387)

It is recommended that I (keep/print/save) a copy of this consent form for my records.

¨ I agree that anonymized quotes of my interview may be used for scientific publications/conferences.

¨ I consent to having my real name and position used for scientific publications/conferences

Acceptance: By signing my name below, I agree to participate in this research study.

Participant's name: _____ Date: _____
Participant's signature: _____ Date: _____
Researcher's signature: _____ Date: _____

Appendix K Interview Guideline

1. What was the rationale behind the introduction of such a significant type of technology into the organization?
2. What were some of the organizational goals that this system was expected to help the Motor Vehicle Authority realize?
3. Prior to the implementation, was there generally organizational consensus on the adoption of such a transformative type of technology?
4. Explain, if you can, the processes involved in introducing the technology to the general staff.
5. For the UTurn system to be effective, legislation had to be drafted to make its use legal; can you speak to some of the organizational policies that had to be changed to facilitate its use?
6. In your capacity as a senior decision maker, how has this technology affected a) your development of policy and b) your day-to-day operations?
7. What have you observed of the practices of those who report to you now that their jobs are directly impacted/augmented by using this technology?
8. What metrics (if any) are used to measure efficiency and changes in productivity now that the system is integrated?
9. With the relative newness of the system, it is expected that the way in which it will be very fluid. What are some of the more significant changes to practice that you have noticed since more stakeholders have engaged with the system?
10. Language is often a significant gauge of changes in culture and practice, has there been any shift in the way people talk about work or the system since its inclusion?