Digital Transformation: Digitising Witness Statements in South African Policing in Alignment with Religious Principles

Nomsa Ingrid Zikalala
Tshwane University of Technology
South Africa

Moses Morero Motseki
Tshwane University of Technology
South Africa

Jacob Tseko Mofokeng*
Tshwane University of Technology
South Africa
Corresponding email: MofokengJT@tut.ac.za

Enoch Zenzile
Tshwane University of Technology
South Africa

Abstract— The utilisation of new technologies towards supporting effective and accountable policing is increasingly dependent on e-government development and other technological advancements. England and Wales have long moved from paper witness statements to digitally recorded statements, known as Digital Witness Statements (DWS). DWS refers to the digital capture, representation, and storage of the information needed for its use as an evidential witness statement in courts in England and Wales. This paper presents a prototype system that could be employed in the South African policing context, aligning with religious principles to ensure cultural sensitivity and ethical considerations. The aim of this study was to create awareness that digitisation has been an efficient method of capturing witness statements in the European policing context. Additionally, this study aimed to highlight the status quo of taking indigenous witness statements in South Africa. The objective was to explore the phenomenon of taking indigenous witness statements and to establish the South African Police Service (SAPS) members' perceptions of the current methods. The study also examined how incorporating religious principles can enhance the acceptance and effectiveness of these digital methods within diverse communities. Thematic content analysis was conducted using Atlas.ti, and measures of trustworthiness were applied. Three dominant themes—"skills," "resources," and "duration"—emerged. The Theory of Performance (ToP) was used, and results indicated that SAPS members identified resources as a barrier to their performance. Integrating religious principles into the digitisation process may address some cultural barriers, fostering a more inclusive and respectful approach to modernising witness statement collection.

I. INTRODUCTION

"It should not be very hard to persuade a police official to agree that their job requires one to have the abilities of a superman. As a matter of fact, in choosing this profession, the police has elected to be a superman [1], [2].*"*

The above quote argues that historically, society is known to expect the police to have unlimited abilities. In modern times, technology is expected to transform the police into superman. However, transformation must be strategic in order to increase productivity and support social welfare. Digital transformation is the use of technology to radically improve the performance or reach of enterprise [3], [4]. The concept of digital transformation is corroborated in digital policing, especially in the digitisation of witness statements, in some countries. England and Wales have long moved from paper witness statements to digitally recorded statements [5]. Many police forces in England and Wales have invested in digital technology [6].

The Fourth Industrial Revolution is in its early stages. Its development will not be linear, nor will it be predictable [7],

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[8], [9]. The Fourth Industrial Revolution refers to new ways in which we introduce and use technology into our societies [10], [11]. In 2001 South Africa was initially ranked first in Africa for e-government. However, it has since either remained static or slipped lower in the global ranking [12]. Despite Africa recording phenomenal growth in Information, Communication and Technology (ICT) revenues and infrastructure investment by the private and public sectors, serious challenges remain for the strategic development of e-government [12], [13]. Perhaps strategic oversight studies could address some of the challenges experienced in the criminal justice system (CJS). This study explored the South African Police Service (SAPS) members' perceptions of the status of the current methods of taking indigenous witness statements in South Africa.

Increasingly, parties to criminal and/or civil proceedings rely on some form of data messages as evidence, and the rules relating to hearsay are often at issue [14]. It is not always cost-effective or reasonable to have every person testify, and the precise classification of a data message, together with its statutory exceptions, becomes increasingly important in modern legal proceedings [14]. Existing legislation in the UK permits the giving of evidence via video link/conferencing and the use of pre-trial statements instead of in-court testimony [15]. The former is commonly practiced in South African courts, but the latter is limited by legislation that seemingly prioritizes oral evidence. In light of the digital transformation across the globe, the consequences of certain resources, like inaccessible translators, are significantly dependent on the policing context. In South Africa, the SAPS is blamed for the poor compilation of case dockets, specifically for inaccurate witness statements translated from indigenous languages to English [16]. Moreover, the integration of religious principles in the digitisation process is crucial to ensure the cultural and ethical appropriateness of witness statements, especially in a diverse society like South Africa. In light of the above, South Africa could consider learning from England's digital policing and corresponding transformational approaches used to mitigate the impact of certain inaccessible resources in the criminal justice system (CJS). Incorporating religious principles into these transformations could enhance the acceptance and reliability of digital witness statements, fostering a more inclusive and respectful approach to evidence collection.

The aim of this study was to create awareness of the SAPS members' perceptions of the status quo and the current methods of taking indigenous witness statements, with a focus on incorporating religious principles to ensure cultural and ethical sensitivity. The research objective is outlined below: To establish if the SAPS members perceive that the process of taking witness statements can be modernised in a way that respects and integrates religious principles. The two research questions are outlined below: (1) In your view, is the process of using pen and paper to take witness statements outdated? (2) In your view, do you perceive that the South African Police Service (SAPS) should use technology to modernise the process of taking witness statements while incorporating religious principles to ensure cultural and

ethical appropriateness? This inclusion ensures that the objective and research questions consider the importance of religious principles in modernising the process of taking witness statements.

II. RELATED WORKS

A. Theoretical and conceptual background

The SAPS of the 21st century is information driven, analytically sound, and evidence and intelligence-led. Generating and sharing the kind of information needed to achieve meaningful reductions in crime must be underpinned by dedicated systems and processes that integrate seamlessly with other role players within the criminal justice value chain. The pervasive and burgeoning nature of advancing technology has forced changes to the administration of justice, and presented several novel challenges for courts and legal practitioners to deal with [14]. The e-docket nucleus is centred in Pretoria and is expected to take at least twenty-years (20) to complete; however, the fear exists that the system will be outdated by the time of completion [17].

There are currently a number of police IT systems in use around England and Wales [18]. The Crown Prosecution Service (CPS) has a single national system, the COMPASS Case Management System (CMS). Running alongside CMS is the Witness Management System (WMS), used by police/CPS Witness Care Unit (WCU). Digital witness statement (DWS) produced must be compatible with these systems and their interface into the police system. Following the recent Home Office and National Policing Improvement Agency (NPIA) electronic witness statement trail it was concluded that Police notes and witness statements are a vital part of the criminal justice process as they are used as evidence. The actual process of digitizing witness statements occurs only in one of the four lenses of digital policing.

Figure 1 shows the outlines four lenses of digital policing which include, proactive policing, digital engagement and digital contact management, mobile optimisation, and digital investigation. The digitisation of witness statements occurs in the mobile workforce optimisation lenses, see Figure 1. McCallum presents technology personas which have been created to illustrate the impact of new technology being delivered by Met, the London Metropolitan Police [19]. Met digital policing enables, crime victims, Personas to be able to upload video of witnesses giving their names and talking about the incident, as they say it [19]. Taylor provides a detailed account of the digitisation process discussed by McCallum [19], [20]. Taylor presents the following scenario to outline the processes of digitizing witness statements [20]: The constable at the crime scene uses a mobile finger print scanners to confirm detainee's identity, and simultaneously initiates a digital case file. The constable also populates digital statement forms and uses an app to generate an electronic image of the suspect. Attending officers attach their notes to a digital folder, which is automatically assigned to an investigator.

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proactive policing	Digital engagement and digital contact management	Mobile workforce optimisation	Digital investigation
• Deterring criminal activity through proactive acton, driven by data analysis and evidence-based policing.	• Includes multi-channel communication with the public, online crime reporting and crowd-sourced intelligence, investigation via social media platforms, and dgital channels for low-risk contact with the police. All these services can reduce demand on contro l rooms and contact centres.	• Neighbourhood and response officers patrolling the beat more regularly, enabled by mobile devices which they can use to recieve and deliver tasking and intelligence, search internal systems, capture statements and record suppporting evidence.	• Digital case files containing evidence and the latest forensics, developed and edited by multiple officers on the move and shared in real time with the Crown Prosecution service.

Fig 1. Four lenses of digital policing (Taylor (2015, p. 3))

Device compatibility and the use of multiple IT systems is an important consideration in any workforce. Simply procuring devices does not guarantee a successful digital transformation. It requires a holistic view of the organisation – including processes, information, technology and people. The dynamics between processes, information, technology and people are demonstrated in electronic devices compatible with police systems and standards. The DWS must meet the following requirements for compatibility: systems support, supporting the criminal justice process, supporting information, data and time, supporting the witness, witness care information, versioning, spelling and grammar checks, and capturing the signature.

B. DWS processes and key technical standards

This section discusses the functionality of DWS key technical standards outline [21]:

- *Systems support:* System support refers to the types of IT systems in use around England and Wales. Any DWS used must be compatable with these IT systems.
- *Supporting the criminal justice process:* The business process and technical standards ensure that the original digital witness statement contains sufficient evidential weight to stand challenges in a criminal court in England and Wales. The support process is as follows:

    "*The exchange of information between the UK police forces and the CPS is largely defined by the Manual of Guidance (MoG) for the preparation, processing and submission of files. It defines the approach to building the prosecution file at pre-charge stage, initial hearing and if the case proceeds further to evidential files. This process assembles this information into a series of MG forms*".

    The DWS is designed to support and enhance the business process already in place and the move towards digital case file management.
- *Supporting information:* There are various types of MG forms or templates in the DWS. The DWS will enable the capture of supporting information, such as personal information, separately to the evidential content [21]. The quality of information is assured through constraint fields such as drop-down lists, tick boxes and pre-defined formats such as dates. Furthermore, all fields that are currently on the MG11 statement are mandatory.

- *Data and time:* A DWS must record the date and time when the witness statement was taken because such information is great value to the integrity of the document. The layout of GM11 statement form has an existing field for the recording of a date. The start time is the first point any information, including support information, is entered into the statement; and, the finish time is when the statement is locked after the final signature.
- *Supporting the witness:* Some witnesses need support through the statement process due to their age, being a vulnerable or disabled person or those with reading difficulties. The DWS application can be set to prompt the statement taker to confirm whether an appropriate adult or other support role is needed. In addition to this DWS could then prompt taker to include this information as witness care information.
- *Witness care information:* In cases where witnesses or victims have specific care needs when attending court, the statement taker must record the existence of those specific needs and any arrangements the UK police forces have made to deal with them.The DWS permits the recording of this witness care information on an MG2 form.
- *Versioning:* Content versioning takes place within the document reducing the usability for officers, victims, witnesses and the Criminal Justice. The process of content version is outlined below:

    "*During the recording of the statement the content should be considered an incomplete document capable of being added to, changed and deleted. At the point of signing where the opportunity to correct, alter or add has taken place and the content of the declaration been viewed versioning should take place and the document then referred to as the original statement*"
- *Spelling and grammar checks:* The use of spelling and grammar checks in a DWS removes the typos and spell errors introduced by the statement taker.
- *Capturing the signature:* The capturing of digital signatures on the DWS conforms to the Electronic Communications Act, the Criminal Justice Act and other statutory requirements of the United Kingdom.

A smartphone, Blackberry or any other type of devices procured must meet the requirements and DWS standards Motorola Solutions conforms to NPIA specifications, and the digitised witness statements and others evidence is proven admissible in court in England, Scotland and Wales. Several police forces in England and Wales have invested in digital technology. Motorola Solutions presents a general overview of Pronto EWS online at URL: www.motorolasolutions.com/en/xu. Pronto Electronic

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Witness Statement (Pronto EWS) from Motorola Solutions utilises the Pronto e-notebook. Pronto EWS enable officers to capture witness statements, associated information and images, in electronic format, at any location. The first case of electronic information created by a police officer accepted in court in England used Pronto EWS under the NPIA electronic witness statement and digital signature pilot programme. Pronto EWS is just one of over thirty (30) police business processes that are currently deployed to a quarter of police forces throughout Great Britain.

All information captured by Pronto EWS conforms to NPIA specifications including review of electronic witness statements and capture of electronic signature by the witness and/or appropriate responsible person. The next sections present a prototype system that could address some issues that contribute to the production of inaccurate witness statements in the South African policing context. Highlighting the available infrastructure helps researchers identify significant potential business benefits in moving from a paper witness statement to digitally recorded statements [21]. Outline below is a range of existing infrastructure that can support digital policing and DWS production in the SAPS context.

C. Resources that may support DWS in the SAPS context

- **State Information Technology Agency (SITA):** In terms of the State Information Technology Agency (SITA) Act no. 88 of 1998. the State SITA is a statutory that regulates the authentication of products or services, the certification of information technology good and services, and procurement of information technology through government departments.

- **Central data base:** There have also been a few large-scale investments in systems aimed at the consolidation of databases into standardised single platforms such as automated biometric identification system (Abis) and the home affairs national identification system (Hanis) [22]. The integrated justice system (IJS) brings together eight department, agencies and authorities in the criminal justice value chain to produce an integrated digital platform to manage the information exchange across the criminal justice system. While the technical infrastructure is available to link systems across organisational boundaries through networks, the institutional infrastructure; the barrier to integration exits mainly because the design of government is based largely on the outdated Weberian model of state organisational development in the 18th century.

- **HANIS:** The Home Affairs National Identification System (HANIS) project is led by South Africa's Department of Home Affairs [23]. Using NEC Automated Fingerprint Identification System (AFIS), HANIS provides a fully integrated 10 fingerprint identity solution to cater for over 50 million adults. With accuracy rates of more than 99.9%, the NEC is the most cutting-edge fingerprint identification technology in the world. The NEC AFIS implemented within HANIS is currently capable of storing and searching up to 50 million records.

- **E-docket:** The e-docket nucleus is centred in Pretoria, a city located in Gauteng province, and is expected to take at least twenty-years (20) to complete; however, there is a possibility that the system might be outdated by the time of completion . The chronology of a case docket is posited in Criminal (in)justice in South Africa: Enlisted below is the nine-step process flow which a case docket follows [24]:
  - Step 1: The initiation of a case docket;
  - Step 2: Case docket registration;
  - Step 3: Transfer of a case docket;
  - Step 4: First information inspection;
  - Step 5: Allocation of dockets to detectives;
  - Step 6: Commencement of the investigation;
  - Step 7: 24-hour docket inspection;
  - Step 8: Dockets are sent to court; and
  - Step 9: Further investigations and feedback.

The ICDMS generates e-dockets which are predominantly used by detectives [12]. Officially known as the Integrated Case Docket Management System (ICDMS), e-Docket allows for an integrated method of monitoring police documents, dockets, and their storage. The purpose of the ICDMS is to ensure that dockets are not lost or tempered with [25]. The government introduced the e-docket system a few years ago in part to fight corruption and theft of dockets .[26] The e-docket system allows SAPS to capture dockets on an electronic database [27], [28]. This can be done either by scanning in each original docket or by typing it in manually. It is intended to include information from external stakeholders including the Department of Home Affairs, Social Development (DSD), Justice and Constitutional Development (DOJ), and the National Prosecuting Authority.

- ***Existing templates that could be digital:*** The Affidavit and Case docket (SAPS 3M) are one of many types of templates used in the South African CJS that could be digitised. The DWS is very good for creating templates or 'proformas' thus reducing the time taken to complete certain specialist statements [21]. If DWS application is not available the default fall back process could be the paper MG11 statement forms [21]. This means that the SAPS could revert back to using paper affidavits and SAPS 3M forms if DWS is unavailable due to an unreliable mobile network, lack of connection to the network or load-shedding.

- ***Mobile network service providers and software:*** This section discusses mobile network service providers and various information technology goods such as software and digital mobile radio communication equipment that could support DWS in the SAPS context.
  - **Mobile network service providers and translator software:** Social media collaboration tools support remote access and real–time sharing of information [29]. Social medial collaboration is

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a global phenomenon accessible through a range of smart phones and mobile network service providers. Cell-C, MTN and Vodacom are some of the mobile networks service providers are information technology good. Information technology goods in South Africa are regulated by the State Information Technology Agency (SITA) (South African, 1998).

Machine translator software is readily accessible on smartphones through various mobile network service providers. It is likely that you have used or heard of at least one of the five most popular machine translator engines – Google Translate, Systran, Amazon Translate, Bing Microsoft Translate, and DeepL Translate Machine translators software allows users to "automatically" translate from one language to another (Crossey, 2020, p. 564). Machine translator software have neutral machine translators that considerably decreases mistranslations as follows:

"Neutral machine translation is intended to artificially "mimic the function of a human brain" by using two networks that "learn over time to create better, more natural translations", to translate entire sentences at a time, and to translate between unfamiliar language pairing" (Crossey, 2020, p. 568).

"Although Google's neutral machines translators purports to decrease mistranslations "by more than 55%-85%" with the assistance of human translators, who review machine translations for accuracy, it "can still make significant errors that a human translator would never make, like dropping words and mistranslating proper names or rare terms, and translating sentences in isolation rather than considering the context of the paragraph or page" (Crossey, 2020:569).

- **Mobile networks and digital radio network:** To fight crime, additional digital policing could be implemented in South Africa (SA) (Moyo, 2015:para.1). Terrestrial Trunked Radio (TETRA) and data visualisation are examples of digital technologies used in South Africa. In South Africa, TETRA was used by the SAPS in the Eastern Cape to secure digital communication, and to ensure public safety and security, in the Nelson Mandela Bay Stadium during the International Federation of Association Football (FIFA) 2020 Soccer World Cup (Fouche & Thomson, 2011, p. 3). TETRA is a digital radio network: It is a technologically secure standard making use of authentication keys, air interface encryption amongst other technologies intended for digital mobile radio communication (Fouche & Thomson, 2011, p. 2). Data visualisation is a vital tool for the police force in South Africa and implementing

more target interventions requires efforts to improving the analysis of the overwhelming unstructured data from closed-circuit television (CCTV) footage, phone records, social media conversations, and etcetera [30].

Today modern control rooms in South Africa integrate various technologies ranging from telephony data from members of the public, radio calls used by dispatchers to talk to responders, video streams from CCTV, body worn video camera and mapping data [31]. Mobility solutions used by frontline personnel increase efficiency by reducing manual inputs and use of pen and paper for reporting and task management [31]. The use of specific technology devices within law enforcement is often credited with helping police personnel perform certain functions or activities more efficiently and, at times, more effectively [32].

- **Human resources:** The human resource capacity of the SAPS in the past ten years is outlines as follows:

  "*The number of staff in the South African Police Service (SAPS) has declined steadily over the past decades and is expected to plateau going forward. The SAPS noted that the biggest outflow of workers in recent years has been at the police station level, leading to fewer boots on the ground. From 30 April 2012 to 31 July 2021, the capacity at the police station level decreased by 14.3% (18,146 employees). SAPS Act employees decreased from 105, 118 members in 2011/12 to 89, 438 members on 31 July 2021*" [33].

  Statistics on the actual human resource gaps in terms of ideal human resource demand versus the actual human resources are available on the SAPS website.

D. Religious Principles

Incorporating religious principles into the digitisation of witness statements involves acknowledging and respecting the diverse religious beliefs and practices within South Africa. There are some religious principles that can be considered for digitising witness statements:

- Respect for Religious Diversity
  - Recognition of beliefs: ensure that the digitisation process respects the religious beliefs of all witnesses, recognizing that these beliefs may influence their willingness to participate and their comfort level with digital recording.
  - Cultural sensitivity: be aware of the cultural contexts influenced by religious practices. This includes understanding specific religious observances, prohibitions, and requirements that might affect the timing and manner of taking witness statements.
- Ethical Considerations
  - Honesty and integrity: align the digitisation process with the principles of honesty and integrity, which are common across many

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religions. This involves ensuring the accuracy and authenticity of digital witness statements.

- Confidentiality: maintain the confidentiality of witness statements, as many religious traditions emphasize the importance of trust and protecting personal information.

- Fairness and Justice
  - Equal ttreatment: ensure that all witnesses are treated equally, regardless of their religious beliefs. This means providing the same opportunities and resources for witnesses of all faiths.
  - Accessibility: make the digitised process accessible to all witnesses, including those whose religious practices may require special accommodations (e.g., ensuring that religious attire does not interfere with digital recording).

- Compassion and Empathy
  - Supportive environment: create a supportive environment for witnesses that takes into account their emotional and spiritual needs. This might include allowing religious counsel or support during the statement-taking process.
  - Respect for religious observances: be flexible with the scheduling of interviews and recordings to accommodate religious holidays and observances.

- Implementation Strategies
  - Training for SAPS members: provide training for SAPS members on religious sensitivity and the importance of respecting religious principles during the digitisation process.
  - Engagement with religious leaders: engage with religious leaders and communities to develop guidelines and best practices that align with various religious principles.

- Specific Practices
  - Digital consent forms: include provisions for digital consent that respect religious beliefs about privacy and autonomy.
  - Translation services: ensure that translation services are available for witnesses who may not be fluent in English, particularly those who speak indigenous languages and follow religious traditions that prioritize their native language.

By incorporating these religious principles, the digitisation of witness statements can become a more inclusive and respectful process, enhancing the trust and cooperation between the police and the diverse communities they serve.

III. RESEARCH METHODS

A. Research paradigm, research design and ethical considerations

A qualitative transcendental phenomenological approach was used in this study. A phenomenology is an approach to qualitative research that describes the meaning of a lived experience of a phenomenon for several individuals, which in this case is the experience of nutrition education. The purpose is to describe the commonalities of the experience. There are 2 main types of phenomenologies, hermeneutical and transcendental, the latter of which is applied in this study. The transcendental phenomenology approach by Moustakas, adapted from Husserl, focuses on the participants' given descriptions to generate an essence of the lived experience, as opposed to hermeneutical phenomenology which more strongly relies on the researcher's interpretations of what the lived experience means [33]. A hermeneutical phenomenological methodology within the interpretive paradigm was used to explore the phenomenon of taking indigenous witness statements to establish the SAPS members' perceptions of the status of the current methods of taking indigenous witness statement. This study used purposive non-probability sampling techniques to identify the target population. The study population was the SAPS members who are responsible for compiling case dockets, transcribing witness statements. The target population was the uniformed SAPS members working in one of any of the nine Community Service Centres (CSC) located in Soweto, a township located in Gauteng province. The nine CSCs identified were SAPS Moroka, Meadowlands SAPS, Jabulani SAPS, Dobsonville SAPS, Diepkloof Zone 1 SAPS, SAPS Kliptown, Orlando SAPS, SAPS Protea Glen, and Naledi SAPS. The sample had eighteen (18) SAPS members, two participants from each CSC in Soweto. The criteria for participation was age, race and tenure, age 18 to 65 years, Black and permanently employed in the SAPS.

Ethical considerations were adhered to. Formal consent was obtained from participating institutions and Participants were informed of voluntary participation, confidentiality and anonymity, assured that they would not be negatively labelled, and that there was no financial incentive for participating in the study. This study had adopted the POPIA requirements. The Protection of Personal Information Act (POPIA) (No. 4 of 2013) is the first comprehensive data protection regulation to be passed in South Africa. Its objectives include giving effect to the constitutional right to privacy regulating the way in which personal information must be processed, balancing the right to privacy against other rights, and establishing an information regulator to ensure that the rights protected by POPIA are respected [34].

B. Data collection methods, data analysis methods and measures of trustworthiness

Interview schedule were administered to the SAPS members during face-to-face interviews. Each interview lasted approximately 30 minutes. The interview schedule consists of two sections. Section A elicited demographic information and, section B enlists two research questions used to establish the South African Police Service (SAPS) members' perceptions of the status of the current methods of taking indigenous witness statements. Thematic content analysis (TCA) was conducted on the data using Atlas.ti. Atlas.ti is one of many Computer Assisted Qualitative Data

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Analysis Software (CAQDAS) programs (CAQDAS) programs with a-distinct set of terms for its coding functions and operations [35], [36]. In accordance to the requirements of scientific research, measures of trustworthiness were applied. The criterion used to validate research located within the interpretive paradigm includes credibility, dependability, confirmability and transferability [37]. The findings were presented in table format, as extracts and summaries.

IV. RESULT AND DISCUSSION

A. Proposed model of witness statement digitisation

The following steps are guidelines of process flow of the proposed witness statement digitisation model (WSDM), illustrated in Figure 2. This model incorporates the existing infrastructure and resources outlined in above.

- *Step one, Witness consent using HANIS online verification*: HANIS (fingerprint biometric database) is run by the Department of Home Affairs (DHA) . This phase entail identity verification of witnesses and suspects. According to Taylor (2015:4-5) constables in the UK police force use mobile finger print scanners – for identity verification. Mobile identity verification and multisystem search also is common in South Africa [29].
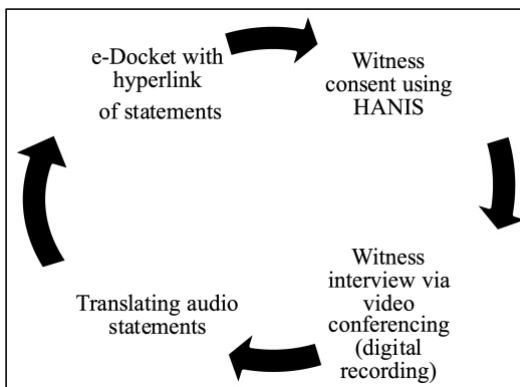

Fig 2. Proposed witness statement digitisation model

- *Step two, Interviewing witness through video conferencing, audio testimony*: During the interview facial compilation is secured: This phase entails production of the witness statements. The audio-link and print version of the witness statements should be included in the case docket. Case docket (SAPS 3M) contain the A1 statement [13]. According to Taylor (2015:4) the digital statement forms are populated. On a DWS electronic signatures can be captured to authenticate witness consent and/or declaration [21]. The use of electronic signatures and certificate-based digital signatures is common in South Africa [38]. For electronic signature to be legally valid, a signature must be a positive act of acceptance visible and clear, must identify the individual; and must be verifiable.

- *Step three, Digitised witness statement is sent for translation, transcribed within CJS*: This phase entails translations and transcribing of audio statements. Statements in indigenous languages will be accurately translated by skilled SAPS officials or contracted language practitioners employed by the SAPS. According to Filby DWS programme enables an interpreter to take a statement directly into another language .

- *Step four, Docket scanning*: This phase involves trail-ready case docket with duplicate witness statements. A e-docket would have a link or hyperlink(s) of the digitised witness statements that was recorded, the indigenous witness statement transcribed and scanned, and the English version of the translated witness statement). This phase provides an audit trail of translated witness statements. Case dockets on the Crime Administration System (CAS) would contain a hyperlink of audio-recorded witness statements. According to Taylor the digital case files are automatically assigned to an investigator through real-time information sharing .

- *Repeating the cycle*: The above four steps should be repeated in instances whereby additional statements are required from the same complainant or witness.

The limitation of the proposed model is that it does not prove the credibility of witnesses and complainants. Hence, cross-examination of witnesses is likely because the South Africa's CJS is still heavily depended on in-court testimonies. The advantage of the proposed model is that the CJS can cross reference the SAPS summary witness statement with the digitised witness statements in the case docket (SAPS 3M). Case docket analysts would readily access original witness statements. The integration of the proposed WSDM to the SAPS's current process flow of a case docket is discussed below.

B. Integration of the WSDM into the SAPS case docket process flow

To mitigate drastic transformation of the process flow of case dockets, the newly proposed model could be integrated to current processes. The chronology of a case docket is posited in Criminal (in)justice in South Africa: A Civil Society Perspective, in which the investigative responsibility of the SAPS is outlined in a nine-step process. Outlined below is the nine-step process flow which a case docket follows [24]:

- *Step 1, The initiation of a case docket*: Once an allegation is made against an individual, a detective is mandated to open a case docket in response to a victim's claim or a crime that has been perpetrated and must be completed in the home language of the alleged accused, witness or complainant.

- *Step 2, Case docket registration*: Once the docket is opened and registered on the Crime Administration

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System (CAS), the accused persons particulars are entered into the CAS by an officer located at the CSC.

- *Step 3, Transfer of a case docket*: Following the data entry in the CSC, the docket is transferred back to the investigating officer or unit detective in order to commence the inquiry process.
- *Step 4, First information inspection*: For audit purposes, the detective or crime office commander must acknowledge and sign for receipt of the case docket.
- *Step 5, Allocation of dockets to detectives*: It is the prerogative of the detective commander to assign and allocate dockets to detectives, who will bear responsibility for the investigation process as well as the management of the docket assigned to them.
- *Step 6, Commencement of the investigation:* The detective assigned a case docket must consult with the Criminal Record Centre (CRC) to establish whether or not the alleged accused has any prior conviction or any information that may assist the prosecutor in building his or her case.
- *Step 7, 24-hour docket inspection*: once the investigation process has commenced a scheduled 24-hour docket inspection takes place; this inspection may occur once a month or half-annually.
- *Step 8, Dockets are sent to court*: A docket checklist serves as a guideline to detectives, as it outlines the information that should and can be collected. Once the docket has been referenced against the docket checklist and is considered complete, it is transferred to the senior prosecutor, who will determine if a prima facie case has been established against the alleged accused individual(s), as a charge is predicated on the evidence contained within the docket, complied by the detective. Once the senior prosecutor is satisfied that a charge or charges can be maintained against an accused, the matter is placed on the court roll and the criminal case proceeds. However, if the prosecutor is of the opinion that there is insufficient amount of evidence in the docket, the docket will be referred back to the detective for further investigation.
- *Step 9, Further investigations and feedback*: The detective in charge must inform the victim or complainant of the whereabouts of the docket as well as the prosecutor's decision to go ahead with a prosecution or choose to have stay of proceedings.

To mitigate task duplication, some steps of the docket case flow should be merged. The integration of the proposed WSDM into the current SAPS case docket process flow is illustrated in Figure 3 below.
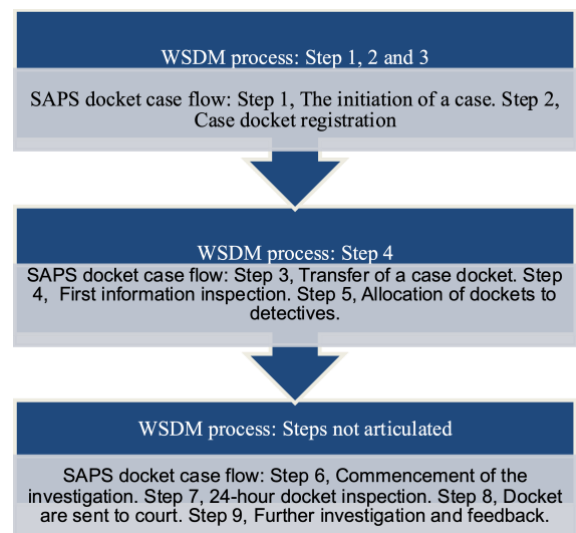

Fig 3. Integration of WSDM to SAPS case docket flow system

Figure 3 above indicates that step 1 and 2 of the SAPS docket case flow could be merged to integrate the WSDM process. Step 3, 4 and 5 of the SAPS docket case flow could be merged to integrate the WSDM process. Step 6, 7, 8 and 9 of the SAPS docket case flow are not included or fully accounted for in the WSDM process. Technologies used to facilitate digital transformation must comply with the laws of the candidate country. Outline below are some legislative framework that provide for digitisation in South Africa:

Criminal Procedure Act (CPA) (No. 51 of 1977): Section 153 and 158 of the CPA provides for exceptions when witnesses may provide evidence through cyber context: Section 153(2)(a) of the CPA (No. 51 of 1977) makes the following provision:

> "*that such person shall testify behind closed doors and that no person shall be present when such evidence is given unless his presence is necessary in connection with such proceedings or is authorised by the court*".

Section 158(2)(a) of the CPA (No. 51 of 1977) makes the following provision:

> "*A court may, subject to section 153, on its own initiative or on application by the public prosecutor, order that a witness or an accused, if the witness or accused consents thereto, may give evidence by means of close circuit television or similar electronic media.*"

The State Information Technology Act (SITA) (No. 88 of 1988): Section 4 of the SITA provides for mandator, and states that:

> "*After consultation with all relevant stakeholders, develop a strategy regarding the convergence of information systems and other systems for departments, and may do so for public bodies; and*

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At all times demonstrate the value added by a private telecommunication network or value-added network service provided by the Agency…"

The functions of the state agency, SITA, include setting of standards, certification of IT goods and services, research, authentication and procurements of technology products or services. The SAPS may procure IT goods and services directly from suppliers other than SITA provided the good procured met the SITA standards.

The Critical Infrastructure Protection Act (CIP) (No. 8 of 2019) aims:

"*To provide for the identification and declaration of infrastructure as critical infrastructure; to provide for guidelines and factors to be taken into account to ensure transparent identification and declaration of critical infrastructure; to provide for measures to be put in place for the protection, safeguarding and resilience of critical infrastructure; to provide for the establishment of the Critical Infrastructure Council and its functions; to provide for matters connected therewith*"

The Critical Infrastructure Protection Act (CIP) protects critical infrastructure against cyber threats, potential human threats like violent riots and terrorist activities. Eskom's electricity grid, telecommunication networks and economic infrastructure are examples of critical infrastructure (Msomi, 2022). Multilingual countries like UK, Canada and the United States (US) have a mature regulatory environment governing hearsay electronic evidence [38], [39]. Over the last few years there has been massive growth in the sources and volume of evidence captured by digital devices in the UK [21].

C. Emerging themes

The findings were that all questions in the interview schedules were completed by all the SAPS members. The SAPS members' ages ranged from 27 to 50 years, and twelve of the SAPS members were female. Their work experience ranged from 3 months to 34 years. The sample was homogeneous African with six distinct languages namely 3 Xhosa, 5 Tsonga, 2 Sepedi, 2 Setswana, 4 Zulu and 1 Venda. There were twelve (12) females and six (6) males. Their level of education ranged from a Matric to an Honours degree. The tally was 6 Matric, 1 Certificate NQF level 5, 6 Diploma, 1 BA-Degree, 1 B-Tech, and 1 Honours Degree. The results also show that a majority of the SAPS members had tertiary education, seven had Matric, one had an NQF level 5 Certificate, seven had a Diploma, one had a B-tech degree, one had a Degree and, one had an Honours degree.

This section presents the three dominant themes identified namely, duration, skills and resources. Table 1 below presents several sub-themes that were collapsed into the dominant theme "duration". Table 2 presents theme and "skills," while Table 3 presents several sub-themes that were collapsed into the dominant theme "resources".

Tabel 1. Theme, duration

No.	Dominant theme	Sub-themes identified	Frequency of identified themes	Participants
1.		Time	1, 2, 1, 2, 5, 6, 3, 1, 1, 1, 4	K1, K3, K4, K5, K6, K7, K8, K10, K12, K13, K15
2.	Duration	reduce	2, 1,	K5, K10,
3.		fast	1, 1	K2. K15
4.		delays	1	K2
5.		Convenient	1	K18

Tabel 2. Theme, skills

No.	Dominant theme	Sub-themes identified	Frequency of identified themes	Participants
1.		Understand	1, 1, 1,1, 1, 2, 1, 1,	K1, K2, K3, K4, K5, K8, K10, K12
2.		Understanding	1, 3, 1	K2, K12, K8,
3.		Understands	1, 1, 2	K1, K5, K10
4.	Skills	Service delivery	1, 1, 1,	K2, K10, K15
5.		Hand writing	1, 2, 1	K4, K6, K18
6.		Train members	1	K5
7.		Training	3	K18
8.		Education	1	K3
9.		knowledge	1	K16

Tabel 3. Theme, resources

No.	Dominant theme	Sub-themes identified	Frequency of identified themes	Participants
1.		Technology	1, 1, 2, 2, 1, 1, 2, 2	K2, K5, K6, K8, K9, K10, K12, K16
2.		System	2. 1, 1, 1, 1	K1, K3, K10, K13, K18
3.		Computers	1, 1	K1, K13
4.		Computer	1,	K10
5.		Laptop	1, 1	K5, K6
6.		Laptops	1, 1	K15, K13
7.		Gadgets	2,	K10
8.	Resources (equipment)	Recorder (equip)	1,	K3,
9.		Recorders (equip)	1	K18
10.		Recorded	1, 1, 1	K3, K17, 18
11.		Record X	2	K3
12.		Documents	1, 1, 1	K1, K8, K15
13.		Storage space	1	K1
14.		Server	1	K14
15.		Safekeep	1	K2
16.		Safe keeping	1	K18
17.		Filing	1	K15
18.		Docket	1	K7

D. Finding presented in the chronological order of the two research questions

- **An outdated statement taking process**

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It emerged from the findings that most of the participants concurred that the process of using pen and paper to take witness statements was outdated. Some responses are cited below:

- K2 said: *"Still relevant and good"*
- K18 said: *"I think it is outdated. Some of us have bad hand writing. We should use voice recorders to take statements".*
- K17 said: *"Yes. It is outdated but it is what we are using"*
- K10 said: *"Yes, it is outdated, taking statements manually it takes lot of time and some of the clients start complaining. It is better to change the system of using pen and use the gadgets"*

- **Use of technology**

The majority of the participants were of the view that the SAPS should use technology to modernise the process of taking witness statements. Some responses are cited below:

- K5 said: *"Yes, but it is something which will take time to train members to get used with it".*
- K6 said: *"Laptops can be utilised because it is faster and it saves time"*
- K8 said: *"Yes, because it is time saving and convenient and it is easy to trace when saved using technology"*
- K14 said: *"Yes, it would make things easy, it will reduce the queues. We would give better service delivery to community".*
- K16 said: *"Yes, they must use modern technology and phase out outdated methods of pen and paper".*

- **Resources**

Resources, skills and duration were emphasised to elaborate on the support for the modernisation of processes. The sub-themes identifiable in the above cited comments can be verified in table 1, 2 and 3 above.

E. The Theory of Performance (ToP)

The Theory of Performance (ToP) develops and relates six foundational concepts (italicised) to form a framework that can be used to explain performance as well as performance improvement [40]. To *perform* is to produce valued results. A *performer* can be an individual or a group of people engaging in a collaborative effort. Developing performance is a journey, and *level of performance* describes location in the journey. Current level of performance depends holistically on six components: context, level of knowledge, level of skills, level of identification, personal factors, and fixed factors. Three axioms are proposed for effective performance improvement. These involve a *performer's mind-set*, *immersion* in an enriching environment, and engaging in *reflective practice*. A performer's mind-set includes actions that engage positive emotion. Immersion in a physical, social and intellectual environment can elevate performance and stimulate personal as well as professional development. Reflective practice involves actions that help people pay attention to and learn from experiences.

The six components informing level of performance are conceptualised as follows [40]:

- First, with regards to context, of performance. This component includes variables associated with the situation that the individual or organisation perform in
- Second, level of knowledge involves facts, information, concepts, theories, or principles acquired by a person or group through experience or education.
- Third, levels of skills describe specific actions that are used by individuals, groups, or organisations in multiple types of performance.
- Fourth, level of identification. As individuals mature in a discipline, they take on the shared identity of the professional community while elevating their own uniqueness.
- Fifth, personal factors. This component includes variables associated with the personal situation of an individual.
- Finally, fixed factors. This component includes variables unique to an individual that cannot be altered.

The SAPS is an organisation operating nationally with over 180 000 officials. Each station will operate differently depending on the socio-economic, rural/urban, cultural and criminal context in which it is located [1], [27]. Since by definition, interpretivist research is context-specific, with regard to locate and participants, generalisability of the findings of research conducted within the interpretive paradigm is practically impossible [37]. The findings of this study cannot be generalised because the data was obtained from a small group of participants.

F. Discussion

The interpretation of findings in reference to the three dominant themes—skills, resources, and duration—is summarized as follows:

Skills are an integral part of the process of taking witness statements, and training was supported. The findings indicated that enhancing the level of skills through education and experience, as per the Theory of Performance (ToP), is essential for improving the performance of SAPS members. Training is not only necessary for acquiring technical skills but also for understanding and respecting religious principles, ensuring that witness statements are collected in a culturally and ethically appropriate manner.

Resources such as computers, laptops, and audio recorders were identified as necessary for the modernization of methods and processes. The potential role of these resources was discussed in reference to the duration of events. Most of the SAPS members concurred that the pen and paper method of taking witness statements was outdated and advocated for the use of technology to digitize or modernize the current statement-taking methods. The integration of digital tools should also consider the ethical implications of

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religious principles, ensuring confidentiality, accuracy, and respect for the religious beliefs of the witnesses.

The findings in terms of the ToP show that indigenous or African SAPS members identify English as the de facto language of record; all except one SAPS member transcribed indigenous witness statements in English. The level of performance in taking indigenous witness statements could be enhanced through digital transformation, as it provides more reliable and accessible methods of recording and translating statements. Ensuring that translation services respect religious principles can enhance the inclusivity and trust in the system.

Duration was another critical theme, highlighting the need for efficient processes. The use of digital tools can significantly reduce the time required to take and process witness statements, making the system more efficient and reliable. Respecting religious observances and providing a supportive environment for witnesses can further enhance the effectiveness and acceptance of these digital methods.

The participants perceived that South Africa was lagging behind in the transformation and skills development of SAPS members. In terms of the ToP, the level of performance depends on the interaction between the context and the level of skills. Therefore, this explains why a majority of the SAPS members supported modernizing the statement-taking processes. By integrating religious principles into the training and use of resources, SAPS can create a more inclusive and respectful process, fostering greater trust and cooperation with diverse communities.

A majority of the SAPS members identified gadgets, laptops, and recorders as alternative resources to the pen and paper system, with relevant comments cited under the theme "resources." Emphasizing resources, the theoretical interpretation holds that the capacities of the SAPS and the CSC could be enhanced through the digitization transformation of outdated systems. This transformation should include measures to ensure that the digitization process aligns with religious principles, providing equal treatment, maintaining confidentiality, and respecting the cultural and religious contexts of all witnesses.

V. CONCLUSION

Three dominant themes or impact factors were identified, namely skills, resources, and duration. In contrast to "duration" and "resources," "skills" were the least challenging. A majority of the SAPS members perceived that digital technology should be used to replace the outdated pen and paper method of transcribing witness statements. Furthermore, they also perceived that technology and modern methods like recorders and laptops should be used to address resource challenges experienced when transcribing witness statements. The SAPS members emphasized the potential role of technology in addressing time constraints resulting from the use of outdated methods of taking indigenous witness statements. The theoretical interpretation of findings indicates that a majority of the SAPS members perceived that primary resources were a significant challenge in their context or the CSC. They believed that the pen and paper

methods of taking indigenous witness statements were outdated and that the digital transformation of these methods could improve their levels of performance. Furthermore, they perceived that the CSC resource challenges, namely outdated methods, contributed to time constraints experienced when taking indigenous witness statements. The SAPS members' skills were not perceived as a significant barrier to performance in the designated CSCs. Incorporating religious principles into this digital transformation process is essential to ensure that the modernization is culturally and ethically appropriate. Respect for religious diversity, ethical considerations, fairness and justice, compassion and empathy, and specific implementation strategies are crucial for the successful integration of digital tools. By respecting religious beliefs and practices, ensuring confidentiality, and providing equal treatment and accessibility, the SAPS can create a more inclusive and respectful environment for all witnesses. This approach can foster greater trust and cooperation between the police and the diverse communities they serve. Moreover, training SAPS members on religious sensitivity and engaging with religious leaders can further enhance the effectiveness and acceptance of the digital transformation. In conclusion, the integration of digital tools and training, along with the consideration of religious principles, can significantly enhance the performance and reliability of the SAPS in taking witness statements. This holistic approach ensures that the modernization process is culturally sensitive, ethically sound, and effective in improving the overall efficiency and trustworthiness of the criminal justice system in South Africa.

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