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Abstract
In order to assess the electronic recordkeeping environment from a legal and regulatory perspective, this document reviews the literature that addresses regulation and law relating to the management of public records in South Africa. First, we examine the historical context of past legislation and regulatory frameworks, specifically in relation to the legacies of colonialism and apartheid. A review of the literature regarding the current management of public records and the related legislation and regulations follows. Finally, future challenges are predicted, along with solutions and specific issues related to the nature and management of electronic records, cloud computing, and the network environment.

1.0 Introduction
‘A day’s work in technology can equate to a thousand years’ or so Ngoepe and Saurombe (2016) warn in their article on provisions for managing and preserving records created in networked environments. Technological developments are moving at an increasingly faster pace, putting the authenticity and security of records created on electronic platforms at risk due to a wide array of factors, and leading to improper electronic records management. When public records lose their authenticity and security, they can no longer provide accountability or transparency (Duranti and Franks, 2016). Exacerbating this problem is the recent proliferation of cloud storage, and the transient nature of electronic records themselves. Governments ideologically invest regulations and legislation with the power to meet these challenges, but their success depends on several complex and related factors.

The purpose of this study is to examine South Africa’s legal and regulatory provisions for electronic records management. While several studies have undertaken a review of public records in South Africa and surrounding countries, a comprehensive review of how current legislation and regulations are meeting the needs of electronic records management is sorely needed. This paper will undertake a review of the literature on the current framework of laws and regulations affecting archives and records, within the unique context of South Africa.

1.1 Historical Context
South Africa has been a site of contested power for much of its long and complex history, and an analysis of the current legal framework affecting public records requires a depth of understanding about this past. The public records of South Africa exist within the contexts of colonization and imperialism, apartheid, and most recently, a governmental republic dedicated to truth and reconciliation.

The system of apartheid largely shaped the past of public archives in South Africa (Harris, 1996). Verne Harris, one of the major voices in South African archival literature, provides a comprehensive overview of the South African archival history in his article ‘Redefining Archives in South Africa: Public Archives and Society in Transition 1990–1996’. Here Harris traces the origins of the State Archives Service (SAS):

[The SAS] has its origins in the fledgling public archives facilities maintained by the pre-Union Cape, Natal, Orange River, and Transvaal colonies. In the decade after Union, these facilities were fashioned into a national archives service positioned in
the Department of the Interior. Empowered legislatively for the first time in 1922, it subsequently underwent a number of name changes and moved from the Interior Department to Union Education, then to the Education, Arts, and Science Department and finally to the National Education Department. (Harris, 1996 p. 8)

Since its inception in 1922, the National Archives has operated under the mandate of maintaining custody of all central and provincial government records. It was only after the passage of the 1962 Archives Act that ‘the Service developed a significant records management capacity sustained by wide-ranging regulative powers’ (Harris, 1996 p. 8). The 1953 Archives Act prompted appraisal of the government’s records, as the proliferation of records expanded greatly with new technologies and increasing numbers of creating bodies (Ngoepe and Keakopa, 2009). The archival services during this time were linked by necessity to the apartheid government, creating rifts between South African archival practice and the international community, as well as within South Africa as resistance to apartheid grew (Harris, 1996). Due to apartheid, most other countries shunned the State Archives Service and its professionals. The archives offered only nominal access to most South Africans, as it predominantly served the minority white population (Ngulube and Tafor, 2006). Harris describes the SAS as having ‘oiled the wheels of apartheid bureaucracy’, a bureaucracy that thrived on government offices’ refusal to submit records to archival policy, unauthorized destruction of records, and a willing collaboration in state arrests (Harris 1996 p. 9).

With the dissolution of the apartheid government in 1994, the South African government adopted the new Constitution in 1996, and with it the National Archives and Records Service Act, which in turn imbued the National Archives and Records Service (NARS) with the ability to assist, support, set standards for and provide professional guidelines to provincial archives services (Ngoepe and Saurombe, 2016). While the record-keeping practices of the SAS were characterized by opacity and access in name only (Harris, 1996), the government delineated new recordkeeping principles that demanded transparency and access to records. This was particularly to service the nation’s Truth and Reconciliation Commission (TRC) and aid in attempts to heal as a nation (Kenosi, 2009). Examining human-rights violations, amnesty, repatriation, and rehabilitation became the task of the TRC. ’Despite the fact that information records generated by a truth-seeking body are often its biggest resource, few scholars have devoted their time to the study of the management of this important treasure’ (Kenosi, 2011, p. 158). Kenosi asks how best to capture the context and type of records that a truth commission produced, and postulates that hiring a records manager would be the easiest way, which the South African TRC did not do. The creation of and need for access to electronic records furthers the challenge the TRC records present; this review addresses that in detail later. Ultimately, the need for the function of public records shifted over the years, from keeping and protecting secrets to promoting transparency and accountability. Kenosi identifies the strangely mutually beneficial nature of secrecy during the apartheid era: Both the oppressor and the oppressed thrived on secrets being kept from one another (Kenosi, 2011). The tenacity of aspects of this culture of secrecy displays itself in some of the challenges discussed below, even as various scholars, archivists, and the larger South African community continuously attempt to meet the demand for proper management of and access to authentic records.

This summarizes the wider history of the South African context in which the juridical system and the resulting legal framework of the nation appear. The dynamics between
indigenous peoples of South Africa, white Afrikaners, and British colonialists resulted in a mixed legal system that carries forward into the present day (Katuu and Ngoepe, 2015). South Africa’s current legal framework is unique in its heritage consisting of these three separate and interrelated contextual backgrounds. These legal systems include the customary law of the indigenous peoples of South Africa, the Roman Dutch law, and British colonial law (Katuu and Ngoepe, 2015). The interwoven legal traditions demand careful consideration of language and translation in government systems, including systems of records management (Alberts and Mollema, 2013). The drafting of future legislation for records in the public sector should address this linguistic need, as South African legislation guarantees the public access to a judicial system in their preferred spoken language (Alberts and Mollema, 2013).

1.2 Definitions
Providing definitions of key terms enables increased clarity of concepts that the review discusses later.

Accountability and Transparency
The concept of accountability and its cousin transparency are foundational to a discussion of records in the public sector. In the archival sense, accountability involves provision of and access to records created and/or maintained by an individual or a corporate body. This facilitates a transparent understanding of the information in the records (Wilson, 2016).

Authenticity and Reliability
Preservation of a record’s authenticity from its creation to disposition (see the section below on the records life-cycle model) ensures its reliability for both the creating institution and the public at large, as in a court of law (Mak, 2016).

Archival Legislation
Archival legislation must exist for the government to properly create, manage, and promote access to all records. Such legislation creates or assigns an archival institution or repository. This differs from records-related legislation that more generally discusses legal provisions for records or information (Goh, 2016). The terms ‘records-related’ and ‘archival’ with respect to legislation are interchangeable throughout this paper.

E-Governance
E-Governance is an extremely broad term that refers to the application of Information and Communication Technologies (ICTs) to supporting good governance. It is a form of electronic access to government services, platforms, and records (Abankwah, 2010).

Enterprise Content Management
The most evolved form for managing electronic documents and records, enterprise content management (ECM) includes all the methods by which Electronic Document Management Systems and Electronic Records Managements Systems (EDMS, ERMS, EDRMS) managed content (Katuu, 2012, 2018).

Records Life-Cycle Model
The two generally accepted models for managing records are the continuum and the records life-cycle models. In South Africa, the life-cycle model is used to manage records. This model allows for preservation of the authenticity and reliability of records from the point of creation to their disposition or preservation (Duranti, 2016).

2.0 Challenges and Opportunities of Legal and Regulatory Frameworks in South Africa
This historical background and the proposed working definitions enable examination of the legal and regulatory frameworks structuring public-records management in South Africa today. Ngoepe and Saurombe (2016), in their article "Provisions for Managing and Preserving Records Created in Networked Environments in the Archival Legislative Frameworks of Selected Member States of the South African Development Community", differentiate between primary legislation (acts, decrees, ordinances), secondary legislation (rules, regulations), and other normative documents such as standards, guidelines, and instructions (p. 26). This division provides a helpful framework for assessing the various factors currently affecting the management of public records. Before assessing the success of the legislation, we review the legal and regulatory frameworks in South Africa.

The first South African archival legislation came about in 1922, with the Public Archives Act that gave the State Archives Service its custodial mandate to embrace the records of all central and provincial governments. While technological advances saw proliferation of records over the 1950s and 1960s, the South African State Archives Service began appraisal and approval of file plans in different government offices (Ngoepe and Keakopa, 2009). In the wake of the political framework of a recently created post-apartheid government, new recordkeeping legislation was passed (Kenosi 2008). In 1996, the new constitution divided responsibility for public records named in the National Archives Act by declaring in Schedule 5 that each province should develop its own act for records management, and in Section 3(g) that the National Records Service would assist, support, and set standards for guidelines on proper records management (Ngoepe and Saurombe, 2016). As one might expect, this division results in the legislation developed by some provinces being much stronger than that adopted by others (Ngoepe and Saurombe, 2016). This Act also imbued the national archivist with the power to determine the conditions of properly managing and reproducing electronic records. It stipulates that there are two types of records in South Africa: those that are preserved over twenty years and those that are not. Yet, according to the legislation, all archival records must be preserved at least twenty years (Ngoepe and Saurombe, 2016).

Other instances of primary legislation in South Africa include the Promotion of Access to Information Act (PAIA) of 2000, the Protection of Personal Information Act (POPIA) of 2013, the Electronic Communications and Transactions Act (ECT) of 2002, and the Regulation of Interception of Communications and Provisions Act (RICAct) of 2002. Secondary legislation consists of several advisory pamphlets numbered 1 thorough 5, on records-management policy and guidelines.

Two statutory bodies are charged with coordinating and harmonising electronic records in the government. The State Information and Technology Agency (SITA), whose mandate covers the acquisition, installation, implementation, and maintenance of information technology in the public sector, is specifically relevant for records in the Cloud. The Government Information Technology Officers Council (GITO Council), which has offices at both national and provincial levels in government, is tasked with consolidating and coordinating the Information Technology initiative in government (Ngoepe and Saurombe, 2016).

Current archival legislation was created with paper records in mind, demonstrated by the rule that all records be saved for twenty years. As technology progresses at an increasingly rapid rate, this is no longer tenable (Ngoepe and Saurombe, 2016). In 'Automated Records Management Systems in the ESARBICA Region', Keakopa (2002) highlights the need for
electronic records in archival legislation. Successfully achieving this requires a new definition of the record that allows for unfixed and unstable documentary forms. Currently the National Archives defines a public record as a record created or received by a governmental body in pursuance of its activities (Ngoepe and Saurombe, 2016). This definition worked extremely well for paper records, but it does not identify requisite aspects of a record that would render it useful for defining complex electronic forms such as geographical maps or changing data visualizations (Ngoepe and Saurombe, 2016).

In ‘The Management of Public Records and Archives in Member Countries of ESARBICA’, Ngulube and Tafor (2006) identify the following functions of national archival institutions that legislation has determined: jurisdiction and functions of institution, records management, archival administration, advisory boards, and enforcement (Ngulube and Tafor, 2006). The identification of these elements is essential for considering and analysing what legislation affecting national archival institutions must provide. It should ensure not only proper archival administration, but also that the archival institution can create advisory boards and enforce the implementation of proper records management. The article reflects the findings of an anonymous survey conducted across the ESARBICA region, in nations that need increased financial resources. It is difficult to assess the direct relevance of findings to South Africa because of the anonymity of the survey, but the authors make helpful suggestions for the entire region.

Ngoepe and Keakopa (2009) assess the current state of archives and records systems in South Africa in ‘An Assessment of the State of National Archival and Records Systems in the ESARBICA region, a South Africa-Botswana comparison’. They point out NARS’s lack of administrative control over provincial statutes, although it does have statutory control that puts the National Archives in a regulatory and monitoring role. However, lack of staff availability and training creates challenges in fulfilling this role successfully (Ngoepe and Keakopa, 2009). Throughout the literature is the recognition that each province should promulgate its own legislation on archives and records service. Each province also needs individual systems (Ngoepe 2016). Findings of Ngoepe’s quantitative study on the models of records management in the public sector of South Africa indicate that most government departments have no separate records management unit; that 90% have no records manager, only eight individuals in designated records management roles; and the frequently observed sentiment that a records manager does not equal a manager in a management position within government departments. (Ngoepe, 2016).

3.0 Sector-Specific Legislative and Regulatory Frameworks

In order to gain a comprehensive understanding of all legislative and regulatory frameworks one needs to examine legislation that controls information across all sectors, as well as legislation that controls information within specific sectors (Ngoepe and Saurombe, 2016). The management of health records in South Africa resides within two categories of relevant legislation: management of records within the health sector, and the National Health Act and other legislative instruments (Katuu and Van der Walt, 2016). The Public Access to Information Act of 2000 facilitates access to records; the Protection of Personal Information Act regulates the processing of personal information and demands the effective management of health information (Katuu and Van der Walt 2016). Additionally, the National and Provincial Health Acts “helped immeasurably to steer the
health sector towards addressing three fundamental challenges: inequity, fragmentation and bias towards curative rather than preventive services’ (Katuu, 2016c).

While these instances of legislation offered steps in the right direction, Katuu and Van der Walt (2016) identify the continuing issues with them as their ongoing lack of legislative provisions, an integrated approach, and guidance on management of records. Furthermore, they indicate that the legislation itself is too general, lacking contact with the health sector, making it difficult to impose compliance. To invoke their metaphor, while the instruments of archival legislation are there, they do not play the music, as there is too much dissonance in legal and regulatory frameworks, and a divorce between the health sector and the wider sector. International lessons offer solutions in the areas of adequately defined goals, responsibilities, and obligations. (Katuu and Van der Walt, 2016)

Turning to the justice system and public records are Ngulube and Makhubela in their article, ‘Justice Delayed is Justice Denied’ (Ngoepe and Makhubela, 2015). The South African national constitution inextricably ties records and justice. According to the constitution, the denial of one right leads to the denial of all rights. Sector-specific records management and a host of other factors have led to mismanagement of records, often resulting in delayed court cases or altogether missing legal files. Recordkeeping gone awry in one area of the justice system affects all. Ngulube and Makhubela suggest that this state of affairs calls for ‘the introduction of among other things, an electronic court management system’ (Ngulube and Makhubela, 2015, p. 290). One other solution might be to add relevant legislation to the Promotion of Administrative Justice Act. However, as shown above, simply offering legislation on its own is not enough. Furthermore, there is reason to be wary of the fix-all solution of an electronic management system. While it is necessary to develop and implement such systems, they too work in a complex environment that requires the presence of several varied factors to consider the system truly successful. What those factors are and how best to ensure them in the South African context are deliberated below.

4.0 Electronic Records, E-Governance, and Records Management in Networked Environments

Electronic public records and their proper management are a reality for all public-sector institutions, both in the central government and in other public sectors institutions. South Africa’s laudable attempts to legislate and regulate digital records are not without their shortcomings. Katuu provides a summary of these efforts in ‘Managing Digital Records in A Global Environment’:

The South African National Archives first published a set of policies and guidelines for managing digital records in 2000 and revised them in 2006 (National Archives and Records Service of South Africa, 2000, 2006b). From the early 2000s, the National Archives sought to assist public sector institutions to manage their digital records more efficiently. In 2002, SITA and the National Archives jointly produced the first list of approved software applications. The approved list of applications, termed Integrated Document and Records Management Systems (IDRMS)…accompanied by approved value-added resellers (VARs). VARs are companies that add features to an existing application and then resell it to end users as an integrated solution. In addition, VARs provide professional services, such as integration and customization of software applications, as well as training to
support the implementation process. These added services make VARs an integral part of the ecosystem in the South African software applications market (Katuu, 2016b p. 877).

The modular approach in the guideline demonstrates a rare exploration of the connection of different components, including records management in Enterprise Content Management (ECM) software applications (Katuu, 2016b). However, the approved listing from 2005 expired in 2008, and seven years since, there are yet no indications of any updates. (Katuu, 2012)

This history indicates the need for further study and updated recommendations on the use of ECM applications, ICTs, and public-sector departments. Ngulube and Ngoepe (2013) discuss records management in relation to components that support corporate-governance processes in South Africa’s public sector. They focus on the Information Communication Technology used in various public sector institutions, and their findings show a lack of proper records management. Furthermore, they demonstrate that audit communities in government bodies are not staffed by records-management professionals. Records must be available for an audit to function properly, and the best method for ensuring the presence and accessibility of records is to have records managers in the top level of governance. However, this study found no records-manager positions in the top levels of management. While many seem to hope that simply implementing a records-management system will be a catch-all solution, case studies in the literature do not support that hope (Ngoepe and Saurombe, 2016).

In their highly relevant article, ‘Managing Digital Records in a South African Public Sector Institution’, Katuu and Ngoepe (2015) identify the major issue in South African public records as being able to distinguish an electronic original from an electronic copy. They advocate for a review of the definition of data management, because record originals require metadata, as well as an electronic recordkeeping system. Properly defining records in evidentiary law, and electronic records in particular, could aid the effort to advance recordkeeping practices. The authors go on to make a particularly relevant analogy in their comparison of information archaeology and information architecture. Information archaeology conveys how old systems persist, and even sink and fade away beneath the new ones built on top. If government institutions are to properly manage records of the past, present, and future, they would do well to acknowledge and provide for the information systems that have come before. For example, national health institutions information systems in South Africa are very fragmented and sorely need integration within each province before a nationwide plan can be implemented. That would require management of digital records, not just from Enterprise Content Management, but also from other systems (Katuu and Ngoepe, 2015). One last fundamental aspect of proper electronic records management is having a specified storage mechanism in place. Katuu and Ngoepe (2015) find that no such storage mechanism for electronic records is in place. Understanding the maturity levels of various enterprise content management systems (ECMs) is a challenge in itself, one that requires further scholarship to fully conceptualize it (Katuu, 2016a). Findings show that organizational culture, change management, and the benefits and drawbacks of building systems on international standards are all factors in implementing any ECM model (Katuu, 2016a), and in the development of legislation and regulations for the future, they should be kept at the forefront of considerations.
5.0 Conclusion

Considering that the access and use of public records is a guaranteed and integral right of every citizen in South Africa, proper records management is of great importance. Properly managing records requires highly detailed records-management processes in the primary legislation, with detail added in secondary legislation. This detail should also include provisions for control at the point of creation and an explanation of the life-cycle concept (Ngoepe and Saurombe, 2016). The inclusion of and provision for electronic records and their particular requirements are of increasing importance in legislation. Many authors suggest different solutions for achieving this goal. Ngoepe and Saurombe offer the suggestion that the South African Development Community create a protocol treaty on archival legislation, culminating in a model statute on electronic records management and preservation (Ngoepe and Saurombe, 2016). Another solution may lie in an issue that came up throughout the literature: the need for increased staff training and the hope that staff retention in archival and records-management posts might increase (Abankwah, 2010; Kirkwood, 1998; Ngoepe and Keakopa, 2009; Ngulube and Tafor, 2006).

Considering the proper management of public records through the lens of the provision of justice, or proper health care, or even in the wake of the Truth and Reconciliation Commission, makes quite apparent how dire the situation is. Additionally, in an article entitled ‘Role of Public Archivists and Records Managers in Governance and Local Development Under a Democratic Dispensation’, Schellnack-Kelly and Van der Walt discuss the proven and potential impact of public-records services on reducing poverty (Schellnack-Kelly and Van der Walt, 2015). The reality is that proper records management is crucial for such ideals, and if the changes suggested above are not made, then public records remain at risk for being mismanaged and ultimately lost. Further research is needed, especially in the context of the electronic environment, to further this cause. That said, Ngoepe (2016) alludes to a light at the end of the tunnel. While the legislation, policies, and procedures are there, all that is left to work on is a customizable model for different government bodies to employ (Ngoepe, 2016). Or, to use another previously mentioned metaphor, the instruments are there, and now it is only a matter of learning how to teach each central government departments and other public sector institutions how to play the music. The literature shows that this will require well-trained records-management professionals, as well as steady funding. These factors are attainable, and it is promising that the continued interest in and discussion of legislation and regulation of public records in networked environments continues forward on an international level today.
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