

# Managing Digital Records in a South African Public Sector Institution

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## Summary

*South Africa's public institutions generate public records that need to be managed in compliance with the legislative framework. However, there are challenges in managing digital records brought about by the complexity within the legal terrain as well as the disparate nature of information systems in institutions. This article provides a brief review of literature that informs the background to a South African research study conducted by the InterPARES Trust Project's Africa Team.*

**Keywords:** Electronic Document and Records Management Systems, Enterprise Architecture, InterPARES Trust Project, Legal framework, National Archives, South Africa

## Introduction

South Africa's public sector institutions generate public records that need to be managed in compliance with the country's legislative and regulatory instruments. For instance, national archival legislation dictates that public records that are older than 20 years and that have enduring value should be physically transferred into the custody of the National Archives. Recent technological developments that have impacted how public records are created and managed such as mobile computing and cloud computing have raised a number of challenges to the traditional means of recordkeeping. The identification and transfer of digital records from public institutions into archival custody has not happened in any systematic manner because the national archival system has struggled to effectively manage such records and facilitate their long-term preservation (Ngoepe and Keakopa, 2011). This is because the national archival system is

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<sup>1</sup> The views expressed herein are those of the author and should not be attributed to the International Atomic Energy Agency.

plagued by poor infrastructure and the lack of skilled capacity to ingest any digital records for permanent preservation (The Archival Platform, 2015, p. 102). As a result, these records are left to the creating agencies to manage and preserve them even though they lack the infrastructure as well as knowledge and skills to preserve digital records in the long-term. It is against this background that a research study exploring the management of digital records is being coordinated by Team Africa that is part of the InterPARES Trust research project (InterPARES Trust, 2015). The particular research study is entitled *Managing records in networked environments using EDRMS applications*. The aim of the research study is to assess the recordkeeping environment in a public enterprise known as Rand Water which is the largest bulk water utility institution in South Africa. Rand Water supplies water to 12 million people in several metropolitan and local municipalities as well as large industries. The research study is assessing both the legal terrain as well as the technological requirements for the management of digital records in the custody of the institution. The research study began in 2015 and will be conducted over a period of 18-24 months.

An initial part of the research study is a review of literature that provides contextual background on the current situation within the public sector in South Africa. This article outlines two aspects related to the literature reviewed as part of the research study: an exploration of the legal and regulatory framework as well as the technological terrain in South Africa. The article provides an outline of the emerging issues that inform the ongoing research study.

### **Literature review on the legal terrain**

South Africa has a 'hybrid' or 'mixed' legal system consisting of three distinct legal traditions (Du Bois, 2004, p. 9-16). The first legal tradition is a civil law system inherited from the Dutch and commonly referred to as Roman Dutch law that draws from two sources: “judicial decisions and the writing of the old Dutch jurists” (Madhuku, 2010, p. 50). The second legal tradition is a common law system inherited from the British, and the third a customary law system inherited from indigenous cultures and is often termed as African Customary Law (Alberts and Mollema, 2014). These traditions have had complex interrelationships with each other sometimes causing areas of strain (Toufayan, 2014).

South Africa’s legal and regulatory system has a tremendous impact on how records are managed in the country’s public sector. Allan (2009, p. 174) argues that there are two major categories of legislative instruments that relate to information management, those that control information across all public institutions and those that “relate to specific information held in specific sectors or structures”. Three of legislative instruments that “control information” across all public institutions are:

- The National Archives Act (NAA) that was promulgated in 1996 and whose key mandate is the proper management and care of records of governmental bodies (South Africa, 1996).
- The Promotion of Access to Information Act (PAIA) that was promulgated in 2000 and facilitates public access to records from both public and private sector institutions within a stipulated time (South Africa, 2000).
- The Protection of Personal Information (POPI) Act that was assented in 2013 and whose key objective is the protection of personal information processed by public and private bodies (South Africa, 2013).

In order to facilitate the management of digital information there several additional legislatives instruments, two of which are:

- The Electronic Communications and Transactions (ECT) Act that was promulgated in 2002 and that facilitates electronic communications and transactions by promoting legal certainty whenever public administration and private business activities need to be conducted in digital form (South Africa, 2002a, p. 16-18).
- The Regulation of Interception of Communications Act (RICA) that was promulgated in 2002 and that regulates the interception of certain telephonic as well as internet communication (South Africa, 2002b).

While these legal instruments all play significant roles in how records are managed in the public sector, the NAA provides the anchor for the management of records, including digital records. The Act defines a public record as “a record created or received by a governmental body in pursuance of its activities” (South Africa, 1996, p. Sec 1). Additional guidance on the management of these public records is found in a number of advisory pamphlets and policy documents and those related to digital records include:

1. *Advisory Pamphlet Number 1 - Managing public records and the law* (National Archives and Records Service of South Africa, 2007c).
2. *Advisory Pamphlet Number 2 – Electronic Records and the Law* (National Archives and Records Service of South Africa, 2007a).
3. *Advisory Pamphlet Number 5 – Managing email and the law* (National Archives and Records Service of South Africa, 2007b).
4. *Guidelines for Managing Electronic Records* (National Archives and Records Service of South Africa, 2006, p. i).

One of the main legislative challenges that public institutions in South Africa face is distinguishing between the original digital record from a copy. The South African Law Reform Commission (2010, p. 52-53) advocates for a review of the definition of data message as well as the inclusion of definitions of ‘electronic’, ‘copy’ and ‘original’ in the ECT Act. Clarifying these definitions is critical when dealing with electronic evidence of transactions and communication in South African legal proceedings (Mostert, 2005, p. 7). Force (2013, p.

127-128) discusses how judges in Canada base their decisions on the admissibility of a record in court proceedings and argues that records professionals should be able to identify original records and be able to provide information on whether they are originals or not. For digital records, this is largely dependent on the “metadata from and electronic recordkeeping system” that gives account of versions of records, when they are destroyed and as well as an audit trail (Force, 2013, p. 127-128). Unfortunately records professionals in South Africa are not able to make this determination because of the gaps in the current legislative and regulatory instruments. Therefore, a review effort such as the one called upon by the South African Law Reform Commission should include examining the law of evidence and other legislative instruments as well as explore the implications to the recordkeeping practices in the country’s public institutions.

### **Literature review on the technological terrain**

The technological challenges of managing digital records in South have been discussed in research projects since the late 1990s and throughout the 2000s (Abbott, 1999, Kwatsha, 2010). Keakopa (2010) and Kemoni (2009) have argued that South Africa is the most advanced African country in the implementation of software applications to manage digital records. A survey of South African institutions aimed at investigating their implementation of software applications used to manage digital records revealed that, by 2010 when the research was conducted, more than 40% of the institutions had five or more years of practical experience (Katuu, 2012, p. 48-49). The survey also revealed that these institutions were using different modules such as document management, records management, imaging and workflow within their applications either as open source or proprietary software (Katuu, 2012, p. 50-51). A common term used for applications that include both document and records management is Electronic Document and Records Management Systems (EDRMS) (Nguyen et al., 2009, Wilkins et al., 2009).

However, records professionals often overlook the wider technological environment within which EDRMS applications are utilised. The enterprise architecture of such an environment often includes many other information systems. Lappin (2010, p. 254) noted that organizations “have an information archaeology, not an information architecture. New applications are brought into the organizations’ information estate, but old applications persist rather than disappear.” Hepsø et. al (2009) demonstrated this information archaeology in an oil and gas company in Norway that sought to introduce MS SharePoint but had to acknowledge and deal with the presence previous information management systems such as shared file drives and Lotus Notes.

A South African example can be drawn from the public healthcare sector. The National Health Act (61 of 2003) makes specific reference of the need for a National Health Information System (NHIS) with each of the nine provincial gov-

ernments responsible for contributing in the management and consolidation of health information. However, the presumption of a single system is not the reality and the Department of Health (2012, p. 5) acknowledges in its eHealth Strategy that the existing information systems are fragmented, lack coordination and are not interoperable. This is mostly aptly demonstrated in the secondary and tertiary health institutions where there are at least 15 different patient management or hospital information systems in use within different provinces of the country as shown in the table below (Department of Health [South Africa], 2012, p. 14).

Table 1. The Patient Management/Hospital Information Systems in South African provinces

Province	Patient Management/Hospital Information System in Use
Eastern Cape	Delta 9
Free State	Meditech; PADS
Gauteng	Medicom; PAAD; PharmAssist; Soarian MedSuite
KwaZulu-Natal	Meditech; Medicom; PALS; Pro-Clin; ReMed
Limpopo	Medicom
Mpumalanga	PAAB
North West	PAAB
Northern Cape	Nootroclin
Western Cape	Clinicom; Delta 9; PHCIS; JAC Pharmacy

As shown in the table above, four of the provinces use more than one information system demonstrating the need for integration within each province before a nation-wide effort in the single NHIS (Katuu, 2015, p. 160). The Department of Health (2012, p. 26) identifies a number of aspects that require implementation towards reaching the goal of the NHIS including:

- Implement the foundation of the Electronic Health Record (EHR) and particularly a national patient registry and Patient Master Index (PMI).
- Implementation of primary health care patient management and Electronic Medical Record (EMR) system/s at clinics.
- Implementation of Pregnancy and Neonatal EMR system to record clinical details with link to EHR.
- Implementation of EMR system/s to monitor anti-retroviral treatment (ART) and tuberculosis treatment.
- Pharmacy systems interface to EMR systems.
- Implement a uniform Integrated Document and Records Management System (EDRMS) at all levels.

This health sector example demonstrates that efforts in the identification and management of digital records within the public institutions would have to acknowledge that EDRMS applications are only part of an archaeology of information systems within health institutions. Therefore South African records professionals have to be cognisant of the whole enterprise architecture of sys-

tems and not just the EDRMS applications when engaging on efforts to manage digital records.

## Conclusion

This article has provided an outline of the literature review being carried out as part of a research study entitled *Managing records in networked environments using EDRMS applications*. The aim of the research study is to assess the recordkeeping environment in a South African public enterprise known as Rand Water. The purpose of this article was to outline emerging issues that provide contextual background on the current situation within the public sector in South Africa. The article has demonstrated that the country has a complex legal and regulatory environment where determining original digital records from copies is an ongoing challenge. In addition it has outlined, using the example of the health sector, that public institutions often have an extensive information system archeology. Therefore the management of digital records should not be just of those originating from EDRMS applications but from other disparate information systems in the enterprise architecture.

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