

**DIGITAL PRESERVATION READINESS IN THE CONTEXT OF E-
GOVERNMENT IN THE PUBLIC SECTOR IN BOTSWANA**

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Background

- ❖ Documents and data in digital form are important for science, education, culture and economic and social development, but assuring their continuity over time is a far from resolved problem.
- ❖ Adu et al. (2016) posit that the relationships between digital preservation and e-government is always symbiotic in all public authorities because effective and efficient recordkeeping in accordance with good practice gives meaning to the right to information for the citizens.
- ❖ As a drive toward e-government, the use of (ICTs) has led to the creation of huge amounts of digital data both within the public and private sector (Adu 2013;Decman and Vintar, 2013)
- ❖ From a policy perspective, it is clear that Botswana has put in place sound institutional, regulatory framework to ensure that e-government is appropriately integrated into socio-economic hierarchy (Moahi 2014 and Sebina 2014). However, the issue of digital preservation still remains a concern.

Background Cont...

- ❖ In Botswana, just like other African countries, the increasing production of electronic records in public sector has undoubtedly raised the issues concerning the challenges of the preservation in digital formats from archivists, librarians and other custodians of such materials (Kalusopa and Zulu 2009).
- ❖ Despite these challenges in the reliability and authenticity of government records to support the accountability of government processes such as open and transparent bidding of tenders continue to persist (Mutula 2008; Sebina and Zulu 2014).
- ❖ Current studies such as the InterPARES Trust Project 2016 on the implementation of enterprise wide systems to manage trustworthy digital records in Botswana public sector also raise similar issues regarding the poor status of digital preservation without pointing to a clear framework for capability maturity readiness in the public sector.

Background Cont...

- ❖ The most recent study revealed that the Botswana National Archives Act of 2007 makes no specific provision for data archiving or for digital preservation and that the policy is structured around paper records (World Bank Group 2014).
- ❖ The current study therefore seeks to assess the digital preservation readiness of the Botswana public sector.

Problem Statement

- ❖ Automation and integration of processes through the e-government to provide services in most of the Botswana Public Sector has raised challenges of the preservation of materials in digital formats.
- ❖ Earlier studies by Wamukoya and Mutula 2005 ;Kalusopa and Zulu 2009; Keakopa, 2007; Kalusopa, 2011; Kootshabe, 2011, Moathodi, 2015 Motupu, 2015, show little examination of the extent or depth on status of digital preservation .
- ❖ Recent study revealed that the Botswana National Archives Act of 2007 makes no specific provision for data archiving or for digital preservation and that the policy is structured around paper records (World Bank Group 2014).
- ❖ This paper seeks to present the status of digital preservation readiness in the context of the e-government.

Purpose and Research Method

- ❖ The purpose of the paper is to present the status of digital preservation readiness in the context of e-government in Botswana public sector.
- ❖ The paper is based detailed descriptive and analytical literature review
- ❖ The paper used qualitative content analysis.

Findings - Preliminary Literature Review

Developed Countries

- ❖ Many European research initiatives have been largely funded in the same field of digitization and digital preservation in the last decade, but with minor success. They have not been able to maintain a similar level of continuity and in particular, a comparable level of such global influence (Guercio, no date).
- ❖ **Lack of Commitment and Awareness** -In 2005, the Digital Preservation Coalition surveyed 104 organisations in the United Kingdom, the results showed that there was considerable confusion about how to address the problem of digital preservation (Waller and Sharpe, 2006).

Findings - Preliminary Literature Review Cont...

Developed Countries

- ❖ China has made great strides in recognizing records in digital formats as official records and also managing and preserving them as such. However, since the authenticity, integrity and accessibility of electronic records are not fully guaranteed, the effectiveness and efficiency of Chinese e-Government, perhaps the whole e-society, are seriously challenged (Xie 2012).

Findings - Preliminary Literature Review

Status in Africa

- ❖ Lack of access of information in an electronic environment and little progress has been made in addressing the long term preservation of digital information (Keakopa, 2008).
- ❖ Insufficient capacity and training to articulate e-records issues and provide guidance and input to policy makers and planners. Skill factors are identified as limiting the opportunity for sub-Saharan Africa to move government services online (Ngulube 2005, Wamukoya and Mutula, 2005; 2008)

Findings - Preliminary Literature Review Cont....

Status in Africa

- ❖ Absence of organisational plans for managing records- Kanyengo (2006) indicated that in the university of Zambia, no plans were put in place on how to interact with digital information resources and there were no policies on preservation.
- ❖ Wamukoya and Mutula (2005) Staff competencies, skills and tools needed to manage e-business processes and e-information in a shared work environment has not been adequately developed in many public sector organizations in East and Southern African region

Findings - Preliminary Literature Review

Status in Africa

- ❖ Absence of legislation, policies and procedures to guide the management of records; written preservation policies (Adu 2015; Ngulube 2005; Ngulube and Tafor 2006; Wamukoya and Mutula, 2005)
- ❖ The additional challenge for born-digital news materials is the problem of obsolescence in retrieval and playback technologies driven primarily by market forces (Evans, 2008).

Findings - Preliminary Literature Review

Status in Africa

- ❖ Absence of migration strategies for records and resistance to change to e-systems- For example Ngoepe and Keakopa 2011, indicated that 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.
- ❖ In Sub-Saharan Africa, government agencies are still operating in a paper based environment and they are still struggling to even make policy decision to move to an electronic environment in daily government operations (Kanyengo 2009).

Findings - Preliminary Literature Review

Status in Africa

- ❖ Lack of reliable data about e-government status in Africa as most government web sites are undeveloped (Mutula, 2008).
- ❖ Computer virus and system failures (Adu, 2015)
- ❖ Lack of Infrastructure -This is because the national archival system is plagued by poor infrastructure and the lack of skilled capacity to ingest any digital records for permanent preservation (Ngoepe and Keakopa, 2011). However, 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.

Preliminary Literature Review Cont...

Status in Botswana

❖ **Regulatory and Policy Framework**

- Botswana lacks an e-records management policy, which makes it difficult to identify, maintain and preserve e-records (Moloi, 2006).
- Weak policy formulation on digitization both at the institutional and national levels; weak legislative framework for digital preservation; (Kalusopa and Zulu, 2009)

❖ **Digitization**

- Ill-defined national digitization co-ordination for digitization activities at institutional, national and regional levels;
- Dearth of human resources for digitization (Kalusopa and Zulu, 2009).

Preliminary Literature Review Cont...

Status in Botswana

❖ Digital Preservation-

- Lack of awareness about the potential of digital preservation by national heritage institutions
- Lack of common standards on digital heritage materials preservation in Botswana.
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Preliminary Literature Review Cont...

Status in Botswana

- ❖ **Technological obsolescence-** For example, BNARS - digitizing the oral history collections faces problems of technological obsolescence as new versions of hardware and software are regularly adopted (Mosweu, 2011).
- ❖ **Knowledge Skills and Training** - Lack of trained personnel in digital preservation (Keotshabe, 2011 and Mosweu 2011).
- ❖ **Citizen Participation** - lack of citizens' engagement and involvement (Moatshe, 2014).

Conclusion

- ❖ While countries differ greatly as to the possibilities they have to implement policies to address sustainability access to digital resources, the fundamental challenges are universal. Closer collaboration in managing these resources will be beneficial for all.
- ❖ There is a need for institutions offering training on records management in Botswana to change their curriculum and align it to the technological change by incorporating digital preservation issues unlike just a general preservation.
- ❖ Botswana National Archives policy of 2007 should be revised and incorporate electronic and digital records management.
- ❖ In that regard there is a research study ongoing exploring the management of digital records in Botswana (InterPARES Trust 2016).
- ❖ Going forward there is a need for in-depth study on the digital preservation capability maturity readiness within the context of e-government in Botswana public sector with a view to developing a strategic assessment framework that ensures digital continuity.