Digital Dividends

One Step Forward, Two Steps Backward? Does E-Government make Governments in Developing Countries more Transparent and Accountable?

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Abstract

Many countries are in the process of transitioning from primarily paper-based administrative systems to digital systems through the application of information and communication technology (ICTs) as part of e-Government initiatives. Though much has been written about the positive power of technology and information to support greater transparency and accountability and, by extension, development, this paper discusses literature relating to the unintended consequences and downside risks for transparency and accountability associated with the way recorded information is produced and managed in digitally enabled developing country public sector contexts. The implications of these risks for implementation of right to information laws is discussed, and a call is made for further research and greater attention to the effects of ICT use in the public sector, especially in regard to effects upon the operation of transparency and accountability mechanisms.

Introduction

Many countries are in the process of transitioning from primarily paper-based administrative systems to digital systems through the application of information and communication technology (ICTs) as part of e-Government initiatives. Though much has been written about the positive power of technology and information to support greater transparency and accountability (see, for example, Bertot, Jaeger, & Grimes 2010; Jaeger & Bertot 2010) and, by extension, development, this paper discusses literature on records management, archives administration and transparency that touches upon the unintended consequences and downside risks for transparency and accountability associated with the way recorded information is produced and managed in digitally enabled developing country public sector contexts. In doing so, the paper seeks to draw attention to an issue that has received relatively little attention in the wider literature on e-Government. As the body of literature explored in this paper suggests, in many countries the introduction of ICTs has brought about a deterioration in the quality, management and accessibility of recorded information with concomitant negative impacts upon transparency and public accountability mechanisms, such as the operation of right to information laws.

Conceptualizing Transparency and Accountability

A broad international consensus has developed around incorporating four key principles—accountability, transparency, participation and inclusion—into the policy, programs and operations of international development organizations in recent years. Carothers and Brechenmacher (2014) argue that the emergent consensus began in the 1990s with an "opening to politics" and the notion that institutions and governance matter in the context of international development.

Transparency has been characterized in many ways, but there is no standard definition. Typically, usage of the term points to transparency involving some form of access to information and may also stipulate that the information must be of sufficient scope, quality and timeliness (Bellver and Kaufmann 2005). As

a metaphor, it serves as a public value that citizens demand from government (Ball 2009; Greiling and Spraul 2010). It can be understood as an institutional relation of monitoring and oversight, as information exchange over decisions and actions, and as a means of understanding how governments work and what they achieve (Meijer 2013, 430; Heald 2006, 30).

Similarly, accountability has a number of different definitions, including many that use the same or similar terminology (e.g., "hierarchical accountability") in quite different ways (Migliorisi and Wescott 2011). This paper uses accountability in the sense of the process of holding to account, overseeing and keeping in check those persons who are entrusted with public responsibilities in the fulfillment of their tasks or functions (see Schedler 1999; Migliorisi and Wescott 2011), and focuses on literature from the fields of records and information management, archives administration and transparency research that discusses the extent to which state institutions and citizens have the capacity to hold public institutions or branches of government accountable through transparency, but whatever transmission mechanism (i.e., the 'long-route' or the 'short-route' to accountability; see Devarajan and Reinikka 2004).

Transparency is an element in the ecosystem of accountability. Transparency, along with enforcement, allows citizens, markets or governments to hold institutions accountable for their policies and performance (Bellver and Kaufmann 2015). According to Florini (1999), the purpose of transparency is "the release of information by institutions that is relevant to evaluating those institutions." While it is possible to have transparency without accountability, effective operation of accountability relies upon the availability of information, and thus it is difficult to conceive of accountability without transparency.

The Rise of E-Government and the "Digitalization"[1] of Government

A surge in the use of ICTs by government, variously called e-Government, e-Governance, i-Governance, and Digital Governance, among other labels, started in the late 1990s with the, then, primary aim of improving government efficiency and the subsequent aim of making improvements in service delivery and accountability (see, for example, Heintze and Bretschneider, 2000; Lee and Perry 2002; Grönlund and Horan 2005; Heeks 2006). Indicative of these drivers of e-Government is this statement in a 1998 paper by Richard Heeks, "If 'electronic government' means anything, it means the use of IT to help deliver the goals of public sector reform. These goals can include decentralisation, higher quality public services … and increased accountability that will make public servants more accountable for their decisions and actions" (Heeks 1998, 1). Wong and Welch (2004, 276) write that e-government is often viewed and promoted as a positive channel for enhancing government accountability and empowering citizens, with the logic being that "more information delivered in a more timely fashion to citizens is expected to increase transparency of government, empowering citizens to more closely monitor government performance (Redburn and Buss 2004). The enhanced interactivity of technology is also expected to improve government accountability as it makes government more responsive to the needs and demands of individual citizens." Tolbert and Mossberger (2006), writing about the effects of e-Government on public trust and confidence, for example, make the argument that it can increase process-based trust by improving interactions with citizens and perceptions of responsiveness.

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[1] This paper uses the term "digitalization" here as a short-form to denote the increasing use of ICTs in government operations. Digitization, on the other hand, is used elsewhere in this paper to refer to the technique of transforming information in analog form, such as paper records, into new digital surrogates.

Development reforms associated with e-Government have typically centered on the introduction of solutions to improve the performance of core public financial management systems (e.g. Financial Management Information Systems, Tax/Customs, Human Resources Information Systems/Payroll, and e-Procurement), sector applications (education and health management information systems, pension systems, social protection systems, payment systems, and more), and e-services through reliable and sustainable ICT solutions and governance structures. The World Bank alone has funded somewhere in the order of 122 financial management information systems in 66 countries since 1984, and since 2003 98% of public sector governance activities have included ICT components (World Bank 2014a). Wong and Welch (2004) note, that in 2000, there were 168 national governments that had their own websites. In more recent times, this agenda has broadened to also include a focus on citizen participation in democratic processes and inclusiveness (see, for example, UNDP 2010; World Bank 2014b), reflecting the merging of the development agenda on accountability, transparency, participation and inclusiveness with e-Government. This shift has led the e-Government agenda to go beyond the use of websites to embrace the use of social media and mobile platforms to promote participation and inclusion, with a number of projects incorporating this technology to increase citizen engagement (e.g., the use of mobile technology in participatory budgeting in South Kivu, Democratic Republic of Congo or for citizen feedback on power service delivery in the Dominican Republic (World Bank 2014b).

As a result of e-Government initiatives and increasing digitalization of government operations, public sector authorities have come to rely upon a growing array of communications technologies to create, exchange, and store information—from traditional paper-based filing systems, to structured databases, 'unstructured' content management systems, social media platforms, web technologies, and mobile platforms (Katuu 2012a, Van Garderen 2002, Wamukoya and Mutula 2005, Pederson, 2008, Luyombya 2011; Mampe and Kalusopa 2013). Management of the information created and contained in these systems has been another matter, with a generally inverse relationship between the age of the technology used to create, exchange and store information and the capability of public sector authorities to effectively manage and preserve the information in a trustworthy and accessible form, a key point to which this paper will return.

Information as a Driver of Development

Though technology has often been seen as a key driver of transformative change in governance and generally has played a prominent role in development programming, development specialists have also recognized—to varying degrees—the importance of information. As early as 1998, Heeks wrote, "… IT is not a necessary part of the accountability equation. The recent mass movements behind government accountability in India, for instance, have involved citizen meetings, typed reports and, at their most high-tech, the use of photocopiers—but not a computer in sight. Why? Because it is information, not technology, that is essential to accountability. Information about the performance of services and programmes, decisions and actions must flow from public servants to those who would hold them accountable. But these information flows do not have to be supported by IT" (Heeks 1998, 2).

A related line of thinking emphasizing information, not technology, has most recently been articulated in the UN Secretary-General's Independent Expert Advisory Group on a Data Revolution for Sustainable Development (IEAG) culminating report *A World That Counts: Mobilising The Data Revolution for Sustainable Development*, which argues that the data revolution—arising from an explosion in the volume of data, the speed with which data are produced, the number of producers of data, the dissemination of data, and the range of things on which there is data, coming from new technologies such as mobile phones

and the "internet of things", and from other sources, such as qualitative data, citizen-generated data and perceptions data—drives "more empowered people, better policies, better decisions and greater participation and accountability, leading to better outcomes for people and the planet"(UN 2014b, 6). The World Bank's report on *Big Data in Action for Development* echoes this sentiment (World Bank 2014c, 19), and its strategy on Citizen Engagement recognizes the availability of timely, user-friendly, reliable, and comprehensive information as a necessary (but not sufficient) enabling condition for citizen engagement.

Though few would argue with the importance of ICT in current times, the emphasis on information rather than technology remains important. However, the interconnectedness of technologies, such as the Internet, with contemporary forms of recorded communication, and the 'embeddedness' of recorded communication in other socio-political and economic processes makes study of the effects of ICTs versus information created, processed and stored using these technologies a challenging prospect. This is not least because of the difficulty of isolating the effects of different variables, such as whether outcomes result from technology, the information that is communicated using technology, or the often-associated business process re-engineering that has accompanied the introduction of new technology solutions.

Weak Records and Information Management Capacity in Governments

If information is capable of driving transformations in public accountability and transparency, then the state of the government's administrative records—the containers of the necessary information—must be investigated. It is by means of records that there exists the capacity to render an account of the actions of public officials and the administrations they serve (Eastwood 2010).

There is certainly plenty of evidence to suggest that the state of records and information management is problematic. For at least the last 15 years, there have been regular warnings about the impact of the loss of control of records relating to a range of government functions coming from the press, auditors, academic researchers, and records professionals. In addition, studies of barriers to effective implementation of right/access to information laws consistently emphasize that poor records and information management prevents governments from responding to requests or, if able to respond, slows down the timeliness of the responses (see, for example, Neuman and Calland 2007). A series of twelve case studies and a recent World Bank report on drivers of effective implementation of right to information laws in twelve countries underscores previous findings on this point (see Trapnell 2014 and Trapnell and Lemieux 2014).

ICTs seen as Further Weakening Government Records and Information Management

Though government recordkeeping was weak in many countries before the introduction of ICTs and growing digitalization, and existing paper-based recordkeeping systems often continue to be weak, there is mounting evidence to suggest that the situation has worsened, not improved, with increased use of technology in the conduct of government business. This is not to make the Luddite's case that governments would be better off without ICTs. Rather, the argument is that it may be a case of 'one step forward, two steps backwards', as ICTs may not have successfully solved information problems within public authorities in many developing countries, as some suggest they have, and may, on the contrary, in a number of cases have made the task of gaining control over recorded communication to ensure that it

is accessible and has integrity much more challenging. This evidence runs counter to received wisdom that e-Government initiatives, such as the introduction of financial information management systems or government portals, which largely focus on the efficiency of specific functions, such as financial transaction processing or service delivery, generally have a beneficial effect on governance (see, for example, Redburn and Buss 2004, 163). While the the use of ICTs in these specific areas may well have seen improvements in public sector capacity to process information, there is evidence that the overall impact of introducing ICT systems on transparency and accountability may be less than clearly positive.

Contra the general trend, almost from the outset of the e-Government wave, Richard Heeks (Heeks 1998) raised concerns about records management. Heeks' wrote then:

> Where public managers lack a clear records management strategy,
> computerisation has often been associated with diminution or even loss of paper records-keeping. Yet computer records, because of their intangibility and malleability are a far poorer basis for accountability than paper records.

> 'The medium is the message' and the message of electronic media is one of truth, objectivity and credibility. So, when often-inaccurate public sector data is produced by computerised accountability systems it gains a mask of objectivity and an aura of credibility that it does not deserve. Recipients can be led to believe in the validity of invalid accountability information, thus undermining the process of accountability.

Heeks' observations pulled back the veil on two assumptions that underpin the notion that technology and digital information support transparency and accountability and, therefore, can drive sustainable development: firstly, that information will be available for as long as it is needed and, secondly, that it will have sufficient integrity to be able to support the goals of transparency and accountability.

Both of these assumptions are open to challenge. There is a significant body of evidence from a wide range of sources that indicates that in large parts of the world the most basic information management structures and controls are not in place in either the paper or the digital environments and that the essential enhanced structures, controls, and skills necessary to manage digital information to ensure long-term accessibility and integrity have not been introduced. This is as true in well-resourced countries (see, for example, a report by the Committee on the Future Career Opportunities and Educational Requirements for Digital Curation (2015) commissioned by the US National Science Foundation) as it is in less-resourced countries, though the challenge is clearly greater in the latter.

As an early example of the growing problem in developing countries, Justus Wamukoya's (1996) study on records management and administrative reform programs in Kenya found that poor record keeping had negative repercussions for economic development in the country. In the same year, Piers Cain's (1996, 163) paper in *Information Technology for Development* shone a spotlight on the issue. Cain wrote:

> Wherever computers are used to carry out a function, records are being generated either electronically or as hardcopy output. Records are a subset of the wider information universe. Their unique quality is that they are the sources of information that provide the evidence base for accountability. This makes the maintenance of good record keeping systems of particular significance to public sector reform. Computers are rapidly being introduced in every area of public administration to enhance control of key resources, notably finance and personnel, and to

improve efficiency. National and donor governments alike have come to view computers as the solution to the management of the information required to deliver effective public services.

If public sector reform is to be a reality, this thinking needs to be modified. Too often, managers regard technology as a panacea for the shortcomings of the existing record systems, procedures and communications infrastructure. Of course, computerised systems offer significant advantages over conventional manual methods because they can manipulate information with great speed and precision, but they have limitations. Computers make excellent information systems because that was the original purpose of many computer applications, but they are much less suited to be record keeping systems. Data on a computer can easily become corrupted for one reason or another. Not every country accepts computer generated data as evidence in a court of law, but those that do, do so only on strict conditions . . . Information systems analysts must remind themselves that computerisation alone rarely solves problems.

Pino Akotia (1997) has also written on the management of public sector financial records and their implications for government transparency and accountability. His work focused on Ghana, showing once again how poor records management can undermine public sector reforms. Barata and Cain (2001) studied the deterioration of records systems that underpin financial management in the context of Anglophone African countries. Ironically given that these systems were introduced as part of strategies adopted by donor agencies and developing countries to promote better financial management accountability and to reduce the spread of economic crimes, these researchers argued that such systems, in fact, contributed to the decline of recordkeeping systems needed to provide trustworthy evidence for accountability purposes. Lemieux (2002) explored the theoretical and empirical dimensions of the relationships among records and information, competitive viability and accountability in the context of the Jamaican financial crisis of the late 1990s and found that poor record keeping had undermined internal management, as well as external public, financial and political accountability throughout the Jamaican banking system. Though the Wamukoya, Akotia, Cain & Barata and Lemieux studies were not all exclusively focused on e-Government nor the management of information in digital environments, these studies all mention the unintended side effects that introduction of ICTs has had on public accountability and transparency.

Nor have these issues been limited to Africa or the Caribbean. As one example, an article by Lim, Chennupati and Pitt (2003) discusses similar issues in Singapore, noting the challenges associated with preservation of new digital forms of records and how to guarantee electronic records' reliability and authenticity in the future. The authors suggest that the combined problems of immense volume, unstable storage media, and obsolete hardware and software present major difficulties and called for greater attention to, and action on, the issue. Henriksen and Andersen (2008) describe a similar scenario in the Punjabi province of Pakistan, but end rather more optimistically with a case study of successful implementation of an electronic document and records management system (EDRMS) to address the issues. Studies conducted in Latin America (Argentina, Chile, and Ecuador), South Asia (Uttar Pradesh, India) and East Asia (Vietnam) by the International Records Management Trust between 2002–2004 reveal similar challenges (IRMT 2015).

More recently, a study conducted by Kwatsha (2010) of records and information management within the Presidency of South Africa discusses information problems within this office brought about by diverse modes of records creation and keeping, including those enabled by the introduction of ICTs. Kwatsha notes, "The Presidency . . . inherited various different filing systems, which could all be linked back to previous changes in Presidential administration. Correspondence was mainly managed in several

Microsoft Access databases that were used to register received documents. Electronic documents were generally received and dispatched daily via E-mail within the Presidency. Most official E-mails were dealt with by their recipients, who did not save them but simply deleted them at their own discretion." The study focused on implementation of a system designed to improve management of records and information with a view to increasing compliance with public records and right to information legislation, and helping the government meet its commitment to transparency and democratic accountability (Kwatsha 2010, 10).

David Luyombya (2011) conducted a review of the state of digital records management in the government of Uganda. His study, which included empirical research findings based on 23 Government of Uganda (GoU) ministries applying both quantitative and qualitative analysis approaches, concluded that despite the existence of the ICT-related policies, a digital records management implementation strategy was lacking in Uganda. The Records and Information Technology Department (RITD), which fell under the Ministry of Public Service, with statutory responsibility for public records across ministries, had not provided advice and leadership in relation to record-keeping best practices and the management of public archives. As a result, digital records were being handled at individual ministry level with unregulated metadata to describe their content, structure and context, leading, the study noted, to considerable difficulties in planning for digital records management. The study also noted that senior managers interviewed were not concerned about digital archives management.

From 1997 to the present day, the International Records Management Trust has been conducting research into the relationship between good governance and record keeping. Like Wamukoya and Akotia's research, its study of the management of public sector financial records in sub-Saharan Africa shows how poor record keeping practices undermine accountability and public sector management. The IRMT's Evidence-based Government Project, which ran from 2002–2004, involved consultations with government officials and records professionals from 38 developing countries through face-to-face, electronic and videoconference meetings. It also carried out 13 case studies and developed two assessment tools: the Records Management Capacity Assessment System (RMCAS) and the E-Records Readiness Tool to be used in conjunction with existing e-Government assessment tools. One of the major findings of this project related to the effects of ICTs on records. The authors of the report (IRMT 2003, 1–2) wrote ten years ago now:

> Records in electronic form are becoming especially critical as developing countries embark on *e-government* strategies . . . The management of electronic records poses special challenges that include:
>
> - the lack of awareness about the importance of e-records and the dangers associated with their loss (e.g., the loss of evidence, risks to entitlements);
> - the lack of accountability for the management of e-records (who is responsible for protecting their integrity and authenticity?);
> - complex, fragmented and incompatible information systems and standards (e.g., computer systems, metadata standards);
> - fragile, quickly changing record media, formats and storage systems (the e-preservation challenge);
> - unconnected or poorly integrated paper and electronic records and duplicated e-records (where is the complete file, the right version?);
> - the lack of e-records skills (among both users and information managers);

- limited collaboration among information professions (records managers, archivists, librarians, IT specialists, web content managers, etc.)

These challenges, noted the IRMT, are greatest in countries where resources are scarce, records management systems are weak and technology tools (e.g. electronic records management software) are unavailable (IRMT 2003). Little has changed in the intervening years for many developing countries.

The Evidence-based Government Project was followed, from 2006–2008, by a project that focused on fostering trust and transparency in Governance, which produced a set of training modules related to the management of electronic records (IRMT 2007 and 2008), and a third project on Managing Records as Reliable Evidence for ICT/ e-Government and Freedom of Information in East Africa (IRMT 2010–2011), which found that records management issues are not being addressed in relation to the ICT/ e-Government and Freedom of Information initiatives that are being planned and implemented within the region, and that the gap placed these initiatives at risk. The research consisted of a high level exploration of the extent of integration between national ICT/ e-Government and Freedom of Information initiatives and records management (IRMT 2011, 2). The study's brief to senior management concludes that:

> Poor records management threatens all government programmes and processes, including e-government and other service delivery activities, economic development initiatives, health care programmes, land reform initiatives, environmental projects, and initiatives designed to enhance citizen rights. At the core of these issues is the erosion of trust in government programmes and decision-making where records cannot be found, the accuracy of the information in the records cannot be trusted, or the records are lost or destroyed.

A more recent study conducted by the World Bank on drivers of effectiveness in the implementation of right to information laws also found that weak records and information management could prevent effective operation of laws governing public access to information (Trapnell 2014; Trapnell and Lemieux 2014). Concerns about records management are being exacerbated in the current environment in many countries because of a growing dependency of governments on records in electronic form (e.g., increasing use of email and text messaging). Electronic records are fragile, and their integrity is dependent upon a quickly changing array of hardware and software. Unless records are carefully managed and protected, governments will be unable to guarantee their availability, authenticity and usability over time and across sites.

While the problem is not unique or new to e-Government, there is growing evidence to suggest that e-Government, or the rising use of digital technologies for the creation, communication and storage of information within public administrations has created new challenges that exacerbate previous weaknesses in recordkeeping systems constraining the availability and integrity of information for transparency and accountability.

Records and Information Management Strategies in the Digital Era

To date, efforts to gain control over administrative records in digital form have largely focused on a 'fighting fire with fire' approach through digitization and introduction of new computerized recordkeeping systems. These technical solutions have had limited success in realizing overall improvements to the way in which digital records are managed. Though many countries have undertaken extensive digitization programs to convert old analog (e.g., paper) records into digital formats that can be more easily processed

and exchanged (e.g., Bayissa, Ketema, and Birhanu 2009; Ramatlhakwana 2009; Hamooya and Njobvu 2010), it is important to note that this technology, in itself, is not a technology for management and preservation of records and information (Katuu, 2012b). The mistake of thinking that digitization alone solves information problems has led to a number of poor outcomes for countries, such as loss of access to trustworthy original records of transactions, uncertainty about the integrity of digital surrogates, and even loss or irretrievability of digital copies of records (Bayissa, Ketema, and Birhanu, 2009; Ramatlhakwana 2009; Hamooya and Njobvu, 2010). Digitization has proven to be no panacea. Nor has it addressed the need to manage new records and information generated in native digital formats.

With the rise in new digital forms of creating, exchanging and storing 'born digital' recorded communications, new technologies have emerged to manage and preserve this information. Katuu (2012a) documents the evolution of two main types of technologies designed for the management and preservation of digital records and information. The first of these is Enterprise Content Management. These systems (and the various evolutionary iterations thereof, including Electronic Document and Records Management Systems) capture, manage, store, preserve and deliver content and documents related to organizational processes and generally comprise modules for Document Management (DM), Records Management (RM), Workflow or Business Process Management (BPM), Collaboration, Portal, Knowledge Management (KM), Imaging, Digital Asset Management (DAM), Digital Rights Management (DRM), and Web Content Management (Katuu 2012a.; CMS Watch 2010, 21-86; Kampffmeyer 2004, 2006). In the main, public sector organizations have had muted success with deployment of ECM applications to manage and preserve the array of digital information they produce and use in their operations. Many ECM systems, even after great effort and expense, have not been successfully implemented (Heeks 2002; Kwatsha 2010). Moreover, the scope of these systems is often limited to specific types of digital information thus leaving large swaths of recorded communications unmanaged and, ultimately, unreliable and/or inaccessible.

The other main type of technology for management and preservation of digital recorded communications is the Trusted Digital Repository, which relies on processes of digital curation and preservation (Katuu 2012a). These technologies consist of a suite of standards, services, protocols and storage platforms and other technology infrastructure designed "to ensure that digital objects of value to society...can be meaningfully reproduced over time, despite evolving representations, mechanisms, rapidly advancing technologies, and continually emerging user expectations" (Foscarini et al 2010). So few public sector organizations have recognized the need for it and put it in place, however, that it fair to say that long-term preservation of digital records and information in most countries in the world is at serious risk.

Less than encouraging results achieved so far with respect to introduction of new technical solutions to address digital records and information management weaknesses beg the question of whether such weaknesses can be addressed by means of technology alone? The following section points to the fact that the underlying issues are not only technical; they are also institutional, and thus are unlikely to be resolved by purely technical approaches.

Impact of Weak Digital Records and Information Management on Public Accountability Mechanisms — The Case of Right to Information

The previous sections discussed weaknesses in the capacity of developing country public administrations to manage records and information in new digital forms, and efforts—not entirely successful—to address

these weaknesses by technical means. This section discusses the impact of digital recordkeeping weaknesses on public transparency and accountability. Transparency and accountability are achieved in public administration through many mechanisms—statutory reporting requirements, legal obligations to produce information for litigation, requests for information by elected officials in parliaments and many other well established statutory, constitutional, and conventional mechanisms. This section, however, will focus on the operation of Right to Information (RTI) laws as a specific example.

The right to information is a facet of government transparency, or open government, which is embedded in the administrative operations of the public sector, compelling all public officials to consider their roles as *caretakers* of information, rather than *owners* (Trapnell and Lemieux 2014). The successful implementation RTI laws, also called Freedom of Information or Access to Information laws in some contexts, is dependent upon governments' ability to create and maintain—and ultimately make available—trustworthy information about government actions and decisions. The British Lord Chancellor's Code of Practice on the Management of Records (issued under the Freedom of Information Act 2000) states "FOI is only as good as the quality of the records and information to which it provides access. Access rights are of limited value if information cannot be found when requested or, if found, cannot be relied on as authoritative, or the arrangements for their eventual destruction or transfer to an archives, are inadequate (cited in Lowry 2013, 25). There is questionable benefit in increasing the number of countries with RTI laws if governments are unable to produce information when it is requested or to proactively disclose good quality information.

Yet, this appears to be precisely what is happening in many countries around the world. The weak state of records management has created a very serious barrier to the right to information. In India in 2014, as just one example, government officials in the Union Home Ministry were unable to respond to a request for information having destroyed the approximately 11,000 files that would have enabled them to respond to the request. They also were unable to produce even a list of the files that had been destroyed ("Our Representative" 2014). Lowry (2013), reporting on a research project on freedom of information and government records in Kenya, Uganda and Tanzania, observes widespread records and information management weaknesses in these countries, and the absence of policies and strategies to address them, concluding that these weaknesses prevent effective implementation of existing and planned RTI laws. Scholarly research on the implementation of right to information confirms that poor records and information management practices have been preventing effective implementation of RTI laws. Confirming these findings, a recent survey of information commissioners points to an increasing number of denials of request for information on the grounds that the information cannot be found or that it is too costly to produce (ICIEN 2014; Taillefer and Elliot 2015).

As digital technologies have transformed the way in which public officials communicate with one another and how such communications are recorded and preserved (e.g., increasing use of social media to communicate) uncertainty prevails about whether these new forms of recorded communication fall within the scope of public records and RTI laws, and, if so, how they should be treated. If a member of the public tweets a public authority does the tweet become a public record and is it in scope of RTI? Do public officials comply with the records management policies of their agencies when using such electronic communications, or are they able to ignore or by-pass them?

Most records and information management policies are built around a framework of physical documents with inadequate attention to digital recorded communications. In the US, critical updates to the policy framework have come only after years of litigation on the question of how emails and other digital forms of recorded communication should be dealt with under the US Federal Records and Freedom of

Information legislation (Wallace 2001; Baron 2004, 2014; Jimerson 2007). In most developing countries, however, legislative frameworks have not been similarly updated and remain inadequate to address digital records and information management concerns. This leads to great uncertainty about how to treat such forms of communication in relation to requests for information under RTI laws and even, in some cases, opens the door to handling of government administrative records deliberately intended to frustrate public access to information (see, for example, Denham 2015).

Information commissioners and those responsible for implementing RTI laws are often at a loss as to how to ensure the capture and make available digital information that is responsive to a legal request for information (ICIEN 2014; Taillefer & Elliot 2015). In a recent international survey of information commissioners, for example, commissioners were asked whether requests made using social media would be valid in their countries. Thirty-five percent felt that generally such requests would be valid, and 30 percent said they could never be valid. Many commissioners had not yet had to deal with an appeal regarding refusal of such a request, which perhaps explains why 25 percent said they did not know if they were valid or not (ICIEN 2014).

Given recent developments in the use of digital forms of communication to conduct government business, especially with the growth of e-Government, there is a need for public officials and information commissioners to have better guidance on how digital information should be captured and treated under public records and RTI legislation. A clearer understanding is needed as to whether national records laws provide sufficient guidance to public officials on the treatment of digital recorded communications as public records and to what extent the use of newer forms of recorded communication, such as email, texts, and social media fall within the meaning of information in RTI laws and related policies. A better understanding also is needed of the respective roles of national archives officials, information commissioners and other agencies with monitoring and oversight responsibilities in addressing poor recordkeeping practices by public officials by, for example, conducting independent investigations and taking measures to strengthen laws and policy guidance when necessary, and whether they have sufficient authority and capacity to undertake such roles.

Records as Boundary Objects and Sites of Contestation

Even improved institutional structures and arrangements, as articulated in updated laws and policies, may be insufficient to address weak records and information management within public administrations, however. In October 2003, as reported by Wamukoya and Mutula (2005), a meeting of Ministers responsible for records and archives management in East and Southern Africa held in Cape Town, South Africa, underscored the importance of good records and archives management practices and called for a collaborative action in a number of areas relating to the management of records and archives including the need to build electronic records capacity. As Wamukoya and Mutula (2005, 69) note, "The Ministers affirmed the need for governments, records management and archival professionals, multilateral organizations and donor agencies to give full support to endeavours of national and other archival institutions to better manage official records irrespective of media." In spite of this call, very little has changed in the intervening years and broader support for digital records and information management improvements has not been forthcoming.

Why is management and preservation of new forms of digital recorded communications not being addressed? The literature on the topic suggests a number of reasons. The availability of the technical solutions for digital records management was a barrier early on (see for example, the reports produced

by the IRMT for its Evidence-based Governance project, 2002–2004 [IRMT 2015]). Now, however, the necessary technologies exist to achieve these objectives (Katuu, 2012b; Thurston, 2015) even if they continue to evolve and have not been fully implemented in every context. Mutiti (2001 and 2002) points to the fact that many countries may have no specific legal or administrative framework within which to operate an electronic records management programme. Another obvious reason is lack of resources. Ngoepe and Keakopa (2011), in their comparative analysis of the state of records and archives management in South Africa and Botswana cite studies by Mnjama (2005), Kemoni and Ngulube (2007), Keakopa (2007), Tough (2009) and Lovering (2010) that point to archival institutions in the East and Southern African Region as being seriously under-resourced. "This under-resourcing of archival work," the authors note, "resulted in inadequate and unintegrated planning; a low skills base among personnel, inadequate records management in government ministries and departments and absence of clear career paths for staff . . . The findings of research by scholars . . . point unambiguously to archival systems that are under severe strain in the ESARBICA region." (Ngoepe and Keakopa 2011, 146). This lack of capacity resulting from chronic under-resourcing is also noted in Wamukoya and Mutula (2005). However, lack of resources is not universally seen as the major barrier (see, Aas 2014). Some hold that view that resources could be obtained if the management and preservation of digital records and information were seen as a national priority.

One factor that may explain the lack of priority accorded records and information management and the preservation of digital information relates to increasing distance between public agencies and officials with responsibility for public records management, on the one hand, and those with authority for decision-making concerning government spending on digital technologies, on the other hand. The above-noted survey of Information Commissioners suggests that digital recorded information has become a 'boundary object' (Yeo 2008) between two distinct sets of actors operating within two distinct institutional frameworks—records and archival professionals, on the one hand, and IT professionals, on the other hand. According to Yeo (2007, 2008):

> If a report or a procedure manual can be seen both as a record and as an information product, it can be denominated a "boundary object."

Sociologist Susan Leigh Star developed the concept of boundary objects in the 1980s. They are entities shared by different communities of practice. Each community may interpret or use them in a different way, but "the acknowledgement and discussion of these differences . . . enable a shared understanding to be formed . . . . The boundary object serves as an interface among these communities" (cited in Yeo 2008, 131). Yeo continues:

> The status of a boundary object need not be limited to items claimed by the recordkeeping and information management disciplines. Boundary objects straddle many different communities of practice; any given object could be claimed by two or more communities. A website is a boundary object because it could be interpreted as (among other things) a record, a computing resource, a sales platform, a corporate management tool, and a manifestation of contemporary culture; a visual item could be interpreted as a record, a photograph, an artifact of aesthetic design, a symbolic object, and an economic asset. Each community brings its own perspective to the table (Yeo 2008, 131).

The institutional world of records—where recorded information, at least in theory, is controlled in a way designed to support transparency and accountability (Eastwood 2010) still tends to operate quite separately from the world of data, the IT world - where recorded information is processed, but not

necessarily managed or preserved with a view to providing trustworthy evidence of government policies, decisions, and actions (for example, see Wamukoya and Mutula 2005).

The relationship between records and information professionals and IT professionals is a complex one. Records and information management practitioners rely upon IT practitioners to provide the technology to help them manage and preserve records and information (e.g., EDRMS and TDRs); but at the same time, they must compete with them for budgetary resources in public sector contexts. Indignation often runs high on the part of records professionals, who may perceive their traditional role as being threatened by the shifting ground of technologies and institutions for the production, communication, use and storage of recorded information. The threat is not without some basis in fact: a 1996 survey showed that in 71% of developing countries the national archives had an active role in the management of records in government agencies (Roper 1996). Fast-forward 20 years, and the picture looks very different, at least anecdotally, with responsibilities for the management of recorded communications falling less to traditional actors (e.g., national archives) and much more to ICT authorities whose identities are not aligned with that of the record keeper but with that of the technologist. At times, records and archival professionals perceive IT professionals as casting them in an anachronistic and 'non-technical' light, and obstructing any perceived encroachment into ICT territory with jargon that many within the records and archives world do not comprehend (White 2004; ARMA 2009). For a number of IT officials and senior government decision-makers, records and archival professionals are simply invisible. These officials exhibit little awareness of their legal obligations under, for example, the public records laws and policies which national archives administer, and the priorities and concerns of managing and preserving records (see, for example, Wamukoya and Mutula 2005; Liu and Murphy, 2014; Jordan and de Stricker 2014; Denham 2015; and Loukidelis 2015).

The schism between the two groups is made manifest and visible in the organizational structures of many governments. Typically, IT is managed by one agency, and the national archives by another, with functions concerning the management of current records sometimes falling to one or another of the existing agencies concerned with recorded information or into a third 'middle ground' between the two. For example, in Estonia—where digital records and information management is recognized internationally as being very good—IT is within the purview of the Ministry of Economic Affairs and Communication, whose Deputy Minister functions as the government's Chief Information Officer. The National Archives, which is the body responsible for the enabling legislation overseeing public records management, falls within the Ministry of Education and Research. A department of Information Society Services, established in 2011–2012, which sits within the Ministry of Economic Affairs, is now responsible for the establishment of guidelines related to information services and governance (Thurston 2015). Ngoepe and Keakopa (2011, 157) note the following with respect to organizational placement of the records and archives function in South Africa and Botswana:

> The results of the survey also indicate that in South Africa the archives services resort [sic] under the Department of Arts and Culture whereas in Botswana it resorts [sic] under the Ministry of Youth, Sports and Culture. These placements compromise the transversal regulatory role of services provided by public archives in both countries. For example, the corporate identity of the institutions is hidden within the departments. As a result, the exercising of authority by the heads is diminished and frustrated by bureaucracy and adherence to hierarchical controls.

This organizational records/data schism constitutes a new form of 'digital divide'.

Yeo also observes that the boundaries between different categories—like records and data and the institutions they represent—are fuzzy, and serve as points of contact between worlds. This may cause dissent, according to Yeo. There is some anecdotal evidence of such dissent in reported cases of contestation between records professionals seeking to establish control over new digital objects to ensure their preservation and integrity, and those who, for various reasons seek to resist such controls by denying that the digital objects they have created or that are found within their information systems are records (see, for example, Lemieux 2001 1980; Baron 2014; Fares 2015) These contestations express enactments of power relations between the two worlds, complete with border skirmishes (Lemieux 2001; Foucault 1980). Indeed, the subject line of one recent post on the records management listserv concerning whether a particular object should be considered a record read: "This is war!" (Fares 2015). Often under-resourced and increasingly marginalized records managers and archivists seeking to fulfill their official mandate as keepers of the record in a digital world, feel besieged as they engage in efforts to gain control over new forms of digital recorded communication.

Such statements signal a second factor that may be in play as a barrier to addressing management and preservation of digital recorded communications: incentives. In many contexts, politicians and senior government officials have a vested interest in maintaining a status quo that makes it difficult (or at least not easy) to find the information needed to hold them accountable for their decisions and actions. The issue is illustrated by a recent report about missing Cabinet documents from Jamaica (Goffe 2015) where a commission of enquiry into a security operation that had led to the deaths of over 70 people drew attention to practices around the handling of ministerial Cabinet and investigative records. Terrance Williams, Commissioner of the Independent Commission of Investigations, is reported to have commented that there was a history in Jamaica of documents related to cases of prosecutions of the police disappearing by the time the case reached court, with such disappearances being attributed to rats, fires or water damage, but with the implication being that in reality such disappearances were very much the result of human intervention (Goffe 2015). Further testimony before the commission suggested that problems with records were widespread throughout the Caribbean region. Thus, political economy factors must also be taken into consideration in the search for solutions to negative side effects (i.e., weakening public record controls) of increased use of ICTs in public administration.

The Jamaican case is not unique, nor, one suspects, will it be limited for very long to the paper-based records featured in the report, if a recent Canadian case, which involved alleged destruction of digital records responsive to a provincial RTI law, is any indication (Taillefer and Elliot, 2015; Denham 2015; Loukidelis 2015). Though reports of the disappearance or mismanagement of digital records in developing country contexts are hard to find compared with similar reports in so-called developed countries, the absence of such reports may be due more to the fact that the use of digital forms of communication is newer, or less widespread, in developing country contexts, and media may be have less capacity to report on such issues, than indicative of the absence of the issue.

The Need for Good Data to Study the Effects of e-Government on Records and Information Management in relation to Transparency and Accountability

Much of the evidence about the negative side-effects of increasing use of ICTs as part of e-Government initiatives on recordkeeping and, by extension, government transparency and accountability, derives from professional literature in the field of records and information management and archives administration, with some further evidence coming from transparency research. This body of literature has the advantage

of being written by practitioners very close to the ground of what is happening within the public sector. It remains largely qualitative in nature, however, and geographically uneven in coverage. Consequently, it is very difficult to generalize from the findings of this literature: robust claims about effects and causality are difficult to make. To advance the discussion, comparative data is needed about the state of records and information management in countries that could be used to analyze the relationship between the quality of recordkeeping, on the one hand, and levels of ICT usage in public administration and other governance and development indicators, on the other hand, in order to allow more robust conclusions about effects. Currently, no such up-to-date comparative data exist. In 1995, the International Council on Archives (ICA) undertook an "International Survey of Archival Development," gathering statistical and qualitative information from national archives around the world (Roper 1996). This survey is now nearly 20 years out of date, and was completed before many countries began digitization programs or to create and store records in digital form. The study by Ngoepe and Keapoka (2011) covers only East and Southern Africa. There is thus a need to establish a baseline picture of the current state of records and information management and archives administration in countries as a first step to identifying how such systems have been changed by the introduction of ICTs and what effect this is having on public accountability and transparency.

Conclusion

This paper has discussed literature on the unintended consequences and downside risks associated with the way recorded information is produced and managed in digitally enabled public sector contexts, with particular focus on developing countries and the international development agenda. The literature has been drawn primarily from research conducted in the fields of records and information management and archival administration, as well as from research on transparency. Though the paper discusses a wide body of literature, it is not a bibliometric analysis and thus makes no claim to comprehensiveness or robust generalizable conclusions about the coverage of the literature on this issue. Such a study is still needed. In addition, there is also a need for research that collects and analyzes comparative quantitative data about the effects of e-Government initiatives on records creation, use, management and preservation, and, by extension, transparency and accountability, as such research would support more generalizable and theoretically robust conclusions. Even based on the available evidence, however, it is possible to observe that the introduction of ICTs as part of e-Government initiatives has had unintended consequences and introduced downside risks for records and information management and preservation. These risks, in turn, have tended to undermine the evidence base needed for the operation of effective transparency and accountability mechanisms such as right to information regimes. Technical solutions to improve digital records and information management do exist, and can help to improve the situation. Technical measures alone will not be enough, however. New institutional structures and arrangements, including updated public records laws and more integrated information governance arrangements, are also needed. Even this will be insufficient, though, without attention to underlying incentive structures.

With discussions on the post-2015 Sustainable Development Goals now underway, which includes the goal of promoting peaceful and inclusive societies for sustainable development (United Nations 2014a & 2014b), providing access to justice for all and building effective, accountable and inclusive institutions, the conclusions to be drawn from the research discussed in this paper suggest that it will be difficult to achieve progress on development if evidence to bring bad actors to justice is missing and if public officials continue to create and keep digital records and information as they have done in the past and are doing now. In light of this evidence, it would seem overdue to move the creation and handling of records up the global development agenda by gathering data to better understand the effect that technology is having

on recordkeeping in developing countries, provide more support to governments to strengthen records laws and bring records—especially new digital ones—under effective control, and to clarify the status of all types of records and information *vis a vis* requirements to preserve and make them available in the public interest.

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