

PEER REVIEWED ARTICLE

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An Information Management Framework for the Support of E-Government in Zimbabwe

ABSTRACT

It has come as a fact that the use of Information and Communication Technologies has come to stay in this world. It aids the implementation of the emerging and irresistible e-government concept that seems to be the in-thing the world over. Zimbabwe has also joined the world by ascertaining its commitment to e-government as witnessed by its promulgation of various e-government services. However, despite the government of Zimbabwe having committed itself to e-government, it is of concern to note that up to this day, the country is operating without a clear information management policy or strategy that will guide and direct all the information management practitioners in the country. This comes as a great weakness in this day and age when the government of Zimbabwe has declared its intentions to subscribe to the e-government concept both in principle and in practice. Although the country has managed to survive without a clearly defined information policy in the pre e-government era, chances of it rolling out an effective and sustainable e-government policy on the same foundation are very slim, given the importance of well managed information as a pillar of sound e-government. The paper employed document analysis as its methodology in which Zimbabwe National Information and Communication Policy (ICT) Policy Framework of 2005 and the Ministry of Information Communication Technology's (MICT) Strategic Plan (2010-2014) were reviewed and assessed the extent to which they sufficed to serve as information management frameworks that can support e-governance in Zimbabwe. The study revealed that there are ICT policies that are meant to serve as ICT strategies for the country but none of them has been put to test and such policies are very piecemeal at best as far as their coverage of information management is concerned. The first policy of such nature was the Zimbabwe National Information and Communication Policy (ICT) Policy Framework of 2005 that was developed by the government of Zimbabwe. This was followed by the Ministry of Information Communication Technology's (MICT) Strategic Plan (2010-2014) which was being led by the then Minister Nelson Chamisa in the Government of National Unity (GNU). Following the dismantling of the GNU, the MICT was also dismantled and a new Ministry known as the Ministry of Information

and Communication Technology, Postal and Courier Services that was headed by then Minister Webster Shamu came up with a new draft policy to guide ICT in Zimbabwe. Ironically, that new policy did not see the light as the then Minister was relieved of his duties and the new and incumbent Minister; Mr Supa Mandiwanzira came up with a new draft to guide the ICT operations in Zimbabwe. Despite all these developments, it remains of concern to notice that none of these policies ever prioritised information management as a strategic pillar of e-government. It is the argument of these authors that without the country's e-government strategy being governed by a sound information management policy that will ensure the creation, management, and preservation of information, the concept will suffer the consequences in retrospect, to the detriment of the concept and the citizens. The study further revealed that the present policies are only addressing technical issues such as network and infrastructural issues of information management, yet other important aspects such as preservation, disposal and legal issues of information management are neglected. The study recommends a new framework that is comprehensive in terms of all the facets of information management. The framework covers all the relevant information management players such as archivists, librarians, records managers and the ICT personnel who should work together so as to collectively manage national information that support e-governance which Zimbabwe has just embarked on. The study further recommends that every government department has an information manager and the Ministry of Information and Broadcasting Services should be the one in charge of the information management framework and oversee its implementation.

Introduction

This paper closely examines the concept of information management (IM) in the context of e-government and expresses the need for the promulgation of a clear IM strategy by the Government of Zimbabwe to anchor its e-government strategy. The paper highlights the foundational role that IM plays in support of e-government and explains the relationship between the two concepts. Driven by the absence of a clearly pronounced IM strategy for the Government of Zimbabwe, which, interestingly, has committed itself to the concept and practice of e-government, the paper finally proposes an IM framework that the Government may adopt and adapt to support its e-government activities.

The importance of IM in an e-government environment

Governments the world over have been, and continue recognising the value of IM. The value and contribution of IM to the wellbeing of a government, an organisation and economy needs not to be overemphasised. In the words of the Government of Alberta (2013), "depending on how it is managed, information has the potential to impact success or failure, efficiency and effectiveness, innovation, and economic opportunities... (p. 6). In the context of e-government and government in general, IM is seen as "...a valuable resource, and the cornerstone of accountable and transparent government" Government of Alberta, 2013, p. 6). Thus, IM has become a pillar of good governance and government as it facilitates transparency and accountability which are requisites in modern day governments and democracies. Put in the words of the New South Wales (NSW) Government (2013), "to realise the potential value, data and information must be managed strategically, in a coordinated and consistent approach across government" (p. 5). This observation directly talks to the aspect of IM, which is considered a necessity for a government to realise its full potential. Thus, governments are challenged to see to it that they give IM the attention that it

deserves as a way of enhancing their effectiveness and efficiency towards the realisation of their full capabilities, a positive direction towards the fulfilment of the key constructs of good governance, namely accountability and transparency. Given the indispensability of IM to e-government, this paper closely examines the concepts of IM and e-government, their relationship and builds a case for the need for a clearly pronounced and supported IM framework for the Government of Zimbabwe to support the country's e-government endeavour. The paper goes on to propose an ideal, but not necessarily prescriptive nor conclusive IM framework that the Government of Zimbabwe can adopt and adapt.

Statement of the problem

Despite the Government of Zimbabwe having embraced the concept of e-government, it would seem that there is no sound IM framework that supports this venture. Without the existence of an IM framework to support the Government of Zimbabwe's e-government strategy, the full benefits of e-government will not only be procrastinated, but may not be realised to the fullest.

Aim of the paper

The study sought to build a case for the establishment of an information management framework to anchor the Government of Zimbabwe's e-government endeavour. This came against the realisation that the Government of Zimbabwe has embraced, and continues to broaden its e-government endeavour. The study further sought to propose an IM framework that takes into consideration, the contextual setting of Zimbabwe. The proposed framework is neither prescriptive nor conclusive as it leaves room for further development, given the fluidity of the sphere and nature of e-government.

Scope of the paper

Although there is a very strong relationship between records, archives and information management, this paper specifically focused on IM issues in light of e-government, with a view of developing an IM framework for possible adoption by the Government of Zimbabwe. Thus, records and archives management issues were outside the scope of this paper.

The concept of information management (IM)

The concept of IM has been not easy to define. In the words of Vodacek and Prague (1998) "in theory as well as practice, the concept of information management (IM) has not yet gained the clear meaning and generally accepted interpretation" (p. 58). They cite three reasons for this, that is, the different interpretations of the term "management", as it features in IM; different interpretations of the term "information" as well as the ever changing leading ideas about the key uses and roles of IM since the 1960s to the present days. Thus, the concept of IM has been elusive

since the term was coined in the 1960s. Despite the elusiveness of the concept of IM, some scholars have proposed working definitions of the term. The Government of Alberta (2013) defined information management as the way through which an organisation ensures that the value that can be generated from its information resources is identified in order for those resources to be utilised to their maximum potential. In the same vein, the key objective of IM is to ensure that “the right information is provided to the right person, in the right format at the right time” (Government of Alberta, 2013, p. 6).

Whilst IM has been viewed and defined predominantly from an information science perspective, the concept has also caught the attention of other practitioners in disciplines such as nursing informatics. Curry (2006, p.189) is one of the scholars who defined IM in the context of informatics. To Curry, “the mantra of informatics is getting the right information to the right people at the right time” (Curry, 2006, p. 189). Thus, “the requirements definition phase is determining (and making sure everyone agrees with) what is the right information, who are the right people, and when is the right time” (Curry 2006, p. 189).

Information management is not a static concept. It has been changing and has been refined over time, although it is still too early to come up with a conclusive definition or description of it. In order for one to easily appreciate the concept of IM, it may be of help to understand the evolution that the concept has taken from the time it emerged in the literature up to the present. According to, Vodacek and Prague (1998), the concept of IM developed in three principal stages which are as follows:

1. *Stage one (second half of the 1960s)*

At this stage, the role of IM was primarily identified with the skill of the choice and use of data, methods and approaches aimed at ensuring the “reengineering efficiency” in solving technical and technological tasks. At this stage, the term IM was already featuring quite frequently in some tasks of data processing, for example, in imposing order on information resources in technological documentation, libraries e.t.c.

2. *Stage two (later into the 1970s and 1980s)*

The term IM, at this time, had been used primarily for methods and approaches of professional working in the field of informatics. The bias had been towards the managerial approaches and techniques for efficient handling of information resources, especially the design, implementation and use of information systems.

3. *Stage three (1990s onwards)*

This stage of IM reflects more and more managerial priority regarding the utilisation of information technology (IT). Bias is towards the final use of IT, that is, the provision of innovative solutions for managerial tasks. Focus at this point is on effectiveness of information processing, that is, doing the right things.

Stages two and three, that of handling information resources, efficient design, implementation, the use of information systems as well as the managerial priority for the use of IT perhaps are the ones that directly tie with the concept of e-government due to the adoption of information systems. This conceptualisation of IM also matches Robertson (2005)'s definition of IM as "in many cases, information management has meant deploying new technology solutions, such as content document management systems, data warehousing or portal applications." Thus, in the context of technology [and e-government], IM, Robertson (2005) observed, encompasses systems such as:

- i. Web content management (WCM);
- ii. Document management (DM);
- iii. Records management (RM);
- iv. Digital asset management (DAM);
- v. Collaboration; and
- vi. Enterprise search and more

Thus, there is no one size fits all definition of the concept of IM as it may mean one or a combination of all the afore-mentioned activities. Robertson (2005) further hinted that in reality, IM is more than just technology as it can also be taken to mean the business practices that underpin the creation and use of information. On that note, IM "...therefore encompasses people, processes, technology and content" (Robertson 2005).

Defining e-government

The concept of e-government is another one that is characterised by many and varied definitions and characteristics and new ways of defining it are still emerging in an effort to refine the concept. Misra (2006) indicated that there are as many definitions of the concept of e-government as there are individuals, organisations and fora defining it. In light of that, the definitions that are used in this paper are not conclusive but are working ones. Misra (2006) stated that e-government can be conceptualised as transformation. This is true in the sense that e-government requires a government to change the way in which it delivers services to the public so that there is new commitment to the delivery of services through the use of IT. In the words of Himmelsbach (2005), cited in Misra (2006), the conceptualisation of e-government as transformation "...gives rise to four important corollaries" (p 4), which are as follows: First, e-government is an intermediary stage for transforming government." In this way, e-government is not considered an end in itself, but rather a way of reaching an end (Himmelsbach, 2005 in Misra, 2006, p. 4). Second, the aim of e-government should be government transformation, failure to which a government will not realise its potential. Third, any e-government's attempt should have administrative reforms being its basis, again failure to which such an attempt will not yield any meaningful results (Himmelsbach, 2005 in Misra 2006, p. 4). Forth, e-government should strive to reach the ultimate stage, still eluding the developing countries, when e-government becomes synonymous with

government (Himmelsbach, 2005 in Misra 2006, p. 4). Thus, e-government is seen as a way of transforming service delivery, with the use of ICTs being at the centre of it all.

The continued use of IT has spilled into government, resulting in the emergence of e-government and e-governance. As observed by Curry (2006), computer uses have changed over the last fifty-plus years (p. 189). This has seen computers not only being used for accounting purposes but for information creation, storage, analysis, packaging, dissemination and many more. It has also enabled governments to render various services via the internet and other offline platforms, a concept which has come to be known as e-government. As pointed out by Tsokoda and von Solms (2013), ICTs could go a long way in streamlining supply chains to better delivery of services, facilitating interactions with businesses and the industry as well as access to information by citizens, resulting in improved decision making.

Following the benefits that are associated with e-government, most governments, if not all, have been thriving to embrace the concept of e-government, with each government making efforts to furnish its e-government practices to achieve efficiency and effectiveness. To cite Alshehri and Drew (2010) “effective e-government is becoming an important aim for many governments around the world.” (p. 35). These scholars elaborated that e-government is about business as usual, rather, e-governance has a special and particular focus on the use of ICTs in order to transform the structure, operations and most importantly, the culture of a government. Thus, in light of this statement, it can be noted that e-government differs from just government in general in that it is characterised by the use of ICTs to revolutionise the service delivery of a government and chief in this revolutionisation process is a cultural change on the part of the government as well as the citizens. Thus, the government has to demonstrate a very high level of dedication to the provision of high quality services to the citizens and the citizens should also be able to interact with the government in a responsive fashion. Put in the words of Alshehri and Drew (2010), “dealing with e-government means signing a contract or digital agreement, which has to be protected and recognised by a formal law, which protects and secures these kinds of activities or processes” (p. 39). This again talks to a need for a new kind and level of commitment by a government to the manner in which it renders services to the public- a very high level of commitment to improved and more interactive services through the use of ICTs.

The nexus between IM and e-government

It is important to note that although this paper discusses the relationship between IM and e-government, the concept of IM has always been a pillar of government in general ever since the concept started featuring in literature as early as the 1960s. Thus, IM is far much older than e-government and has always underpinned government in general. In the context of e-government, IM is tied to what the United Nations (2014) referred to as e-information, which is about “enabling participation by providing citizens with public information and access to information without or upon demand” (p. 197). Of particular note here might be the fact that the provision of such information as well as access to it is not just on demand but is also provided without demand to

the public. Thus, this can be seen as a sign of commitment to change citizen's lives on the part of a government, thereby eliminating the barriers of access to such information as well as promoting good governance through transparency and accountability. In terms of conceptualising IM, this implies stretching the usual definition of IM from the one which just end with the provision of information to the right person at the right time, to include a deliberate move by a government to provide information without even any demand being placed on them by the public.

It is an undisputable fact that technology has come to stay and is unstoppable. Put in the words of the NSW Government (2013) "technology is now an integral part of daily life and doing business" (p. 7). In explaining the importance of IM in e-government, the Government of Alberta (2013) stated that along with other resources such as people and finances, information is a key business resource and its management is critical in achieving the priorities of a government. The afore-said statement is particularly true in an e-government atmosphere where ICTs allow governments, through their departments and ministries, to easily generate, analyse, share, disseminate and manipulate information. This is also observed by the United Nations (2014) which indicated that "the amount of data that government agencies collect is likely to grow exponentially in the coming years" (p. 11). In light of these observations, it becomes so obvious that there is a clear relationship between e-government and IM and this comes as a call to all governments to put in place clear strategies of dealing with not only large volumes but diverse information types, forms and classes that are likely characterise e-governments which have become a worldwide phenomenon.

The need for an information management framework in Zimbabwe

Zimbabwe is one country that has embraced the concept of e-government. According to Rajah (2015), the country is one of the rare countries on the African continent "...with a history of commitment to good governance and ICT-related initiatives" (p. 11). As early as 2012, the Government of Zimbabwe had identified ICTs as one of the pillars on which the country's economic turnaround would be hinged (Tsokoda and von Sols (2013). In fact, Tsokoda and von Solms (2013) revealed that "the ICT sector was identified as one of immense importance in stimulating and supporting the economy to greater performance as a sector, and as a supporting unit in services to all the other sectors." As further indicated by Tsokoda and von Solms (2013), massive investments have been made by both the public and private sectors in Zimbabwe.

There is ample evidence to show that the Government of Zimbabwe has embraced the concept of e-government. Rajah (2015) revealed that "in recent years, Zimbabwe's efforts to provide e-government services to the public have been recognised" (p. 11). In 2015, the Minister of Information and Communication Technology, Postal and Courier Services Mr Mandiwanzira also pronounced the Government of Zimbabwe's commitment to e-government by stating that "Government is making great strides in the use of ICTs by introducing various e-government services to the citizenry." A 2014 survey of that was conducted by the United Nations in terms of e-government using the E-Government Development Index (EGDI) ranked Zimbabwe number

one hundred and twenty six (126) in the world, a sign that the country is indeed into e-government although the ranking pointed to the need for the country to improve its position by enhancing its e-government strategy. In terms of the actual score on the EGDI, the country obtained a middle score of between 0.25 and 0.50, together with countries such as Namibia, South Africa, Congo, Senegal, Bahamas, Algeria, Iraq, Iran, Lesotho, Thailand, Viet Nam just to mention a few. The Government of Zimbabwe also outlined, in one of its web pages: <https://www.gisp.gov.zw/cybersecurity/index.php/zimbabwe-approach> what it termed ZW e.Gov Stages in which the stages were categorised as:

1. Initiation;
2. Provision of information;
3. One way interaction;
4. Two way interaction; and
5. Transaction

All this is evidence that Zimbabwe has already embraced the concept of e-government and is already performing to a point of being able to compete with the rest of the world as revealed by the UN survey of 2014.

However, Zimbabwe seems to be characterised by an acute absence of an IM policy or framework such that information is not properly managed. Focus has been on the concept of e-government and the associated requisite infrastructural side of information management in which the government prioritises the technical side of information management whilst principles and policies to guide the management of the actual information are conspicuously missing. In one of its web page: <https://www.gisp.gov.zw/cybersecurity/index.php/2014-03-17-09-24-43/2014-03-25-08-02-22/attributes-of-information-security-cia> the Government of Zimbabwe, in a very piece-meal fashion, mentions a few issues that relate to IM such as information security, integrity and availability as they relate to information security, which is just part of IM and this cannot suffice as an IM framework. This has created an imbalance in the whole equation of information management. Prioritising the infrastructure for the generation and transfer of information without giving due attention to policy and legal aspects of information management is just as good as managing the container of the information whilst neglecting the actual content- the information- which is the crux of the matter in information management. The major question is: how will the infrastructure contain the information that has no clear strategy of management? The United Nations (2014) encouraged governments the world over to come up with and strengthen their policies and frameworks to support better decision making in light of the emergence of e-government initiatives. It wrote “in all countries, governments should focus even more on starting; growing and sustaining open data initiatives through updating their policy, legal and institutional frameworks as well as improving leadership and raising awareness at higher decision making levels” (p. 11). This statement directly talks to Zimbabwe in light of a lack of a clear IM framework within which all the government ministries and departments should operate and can support e-government in the long run. As the Government enhances its e-government activities, the

information that it generates will increase and as already observed by the United Nations (2014), such data, which has always been a strategic asset for any organisation, including a government, "...its importance has exponentially grown in the last decade due to enormous amounts of data creation and advances in data collection, processing and analysis technologies" (p. 11). Thus, in light of this, it is evident that e-government activities in Zimbabwe are generating volumes and volumes of electronic archives and information, which the country has to pro-actively manage by putting in place a clear IM strategy.

An analysis of the Zimbabwe National Information and Communication Technology Policy Framework of 2005; the Ministry of Information Communication Technology (MICT) Strategic Plan 2010-2014 and the National Policy for Information and Communication Technology (ICT) of 2015 indicates that all these policy documents were prioritising issues of IT infrastructure and tended to encourage the utilisation of IT in all the sectors of the economy as well as in both the private and public sectors of the economy. Conspicuously missing in these policies is an accompanying national IM framework governing all the matters of information IM in order to sustain the government's e-government move. It would seem the Government, for now, is prioritising infrastructural challenges, which will in turn facilitate the exponential creation and analysis of information relating to various e-government activities. Unforeseen is the fact that without pro-actively- preferably, or at least, reactively drafting and rolling out a national IM framework to aid e-government, IM problems will retrospectively derail and dampen the achievements of the government's e-government initiatives. Thus, the situation that is obtaining in the country is clearly marked by a plethora of future IM related problems that can be best addressed pro-actively by establishing and rolling out an IM framework for a country such as Zimbabwe which has committed itself to e-government. It is therefore, the argument of these authors that without a clearly defined IM framework to support and enhance e-government, the concept of e-government will suffer in retrospect. Thus, an amalgamation of all the above-mentioned factors makes the need for an IM framework even more pressing. Taking a cue from the Government of Alberta (2005) which explained some key benefits of putting in place an IM framework for a government might do the country a lot of good. Some of the key points showing the need of having an IM framework as proffered by the Government of Alberta (2005) include, but not limited to the following 1) improved service delivery in the sense that "information assets are core to the business of your ministry and government. Better information can improve the delivery of services to clients, stakeholders and the public" (p. 1). 2) Managing the ever limited resources in the sense that "delivering a plan [of IM] will help you set priorities and improve the management of information to support your ministry's business objectives" (p. 1). Thus, an e-government strategy that is not supported by an IM framework is in the danger of losing out on some of the benefits that are associated with proper IM, including the two key constructs of good governance which are accountability and transparency.

Possible way forward

In light of the conspicuous lack of an IM amid the advancement of e-government in Zimbabwe, it is recommended that the Government of Zimbabwe develops and rolls out an IM framework that will guide all of its ministries and units so as to enhance and sustain its e-government efforts. As shown elsewhere in this paper, the government of Zimbabwe is committed to the concept of e-government, and an IM framework is a prerequisite to avoid retardation and possible derailment of the Government's efforts. This also requires the Government of Zimbabwe to understand and embrace the concept of information culture in which information is understood and taken as a strategic resource for a government, an atmosphere that is conducive for IM to prevail in the form of ICTs and all the other prerequisites such as organisational and government support should exist to support IM in the context of e-government. Embracing the concept of information culture will go a long way in helping the Government of Zimbabwe to fulfil one of the requirements of e-government, that is, e-information, which the United Nations described as a deliberate move by an e-government to provide information electronically to the public, not only on demand but without demand. This can only be successfully achieved by having a clearly defined IM policy to avoid a situation in which information provision in an e-government being done in a piecemeal fashion. The following is a proposed IM framework that is recommended as a start for the Government of Zimbabwe and is liable to further refinement through reviews following trials or implementation.

Information culture, IM as pillars of e-Government

The link between information culture and IM, two main concepts that underpin e-government, is indisputable. Information culture, according to Wei Choo, et. al (2008, p. 793), consists of three components, namely, "communication flows; cross-organisational partnerships; internal environment (cooperativeness, openness, and trust); information systems management; and processes and procedures." Thus, from this definition, it can be noted that IM is one of the pillars of an information culture. They went further to classify IM as one of the three capabilities of information which are: 1) Information Technology Practices, which focuses on managing IT applications as well as the IT infrastructure in an effective manner to support operations, business processes, innovation, and managerial decision making 2) Information Management Practices where focus is on the ability of an organisation to effectively manage information throughout its life cycle and use, including sensing, collecting, organising, processing, and maintaining information; and Information Behaviours and Values which talks to the ability of an organisation to instil and promote behaviour and values in people for effective use of information (Wei Choo et .al, 2008, p. 794). This implies that after developing effective IT infrastructure and applications that will facilitate the activities and processes of an organisation, information will be generated with ease. It is at this stage that then IM becomes much more important to ensure that the resultant information is managed in a manner that ensures effectiveness of an organisation. Finally, given the existence of a clear IM strategy, the third tier of an information culture requires the organisation to cultivate behaviour and values that promote effective utilisation of information to

the advantage of the organisation. In the context of e-government, this implies that the existence of the three ties of an information culture will act as a basis for e-government. In the context of the present study, the concept of information culture is something that should be embraced at all levels in all government departments to promote information sharing and utilisation which in turn will lead to better service delivery. However, the scope of this paper was limited to IM, thus, the concept of an information culture was not examined in detail. The following section is on the proposed IM framework for Zimbabwe.

A recommended information management framework for Zimbabwe

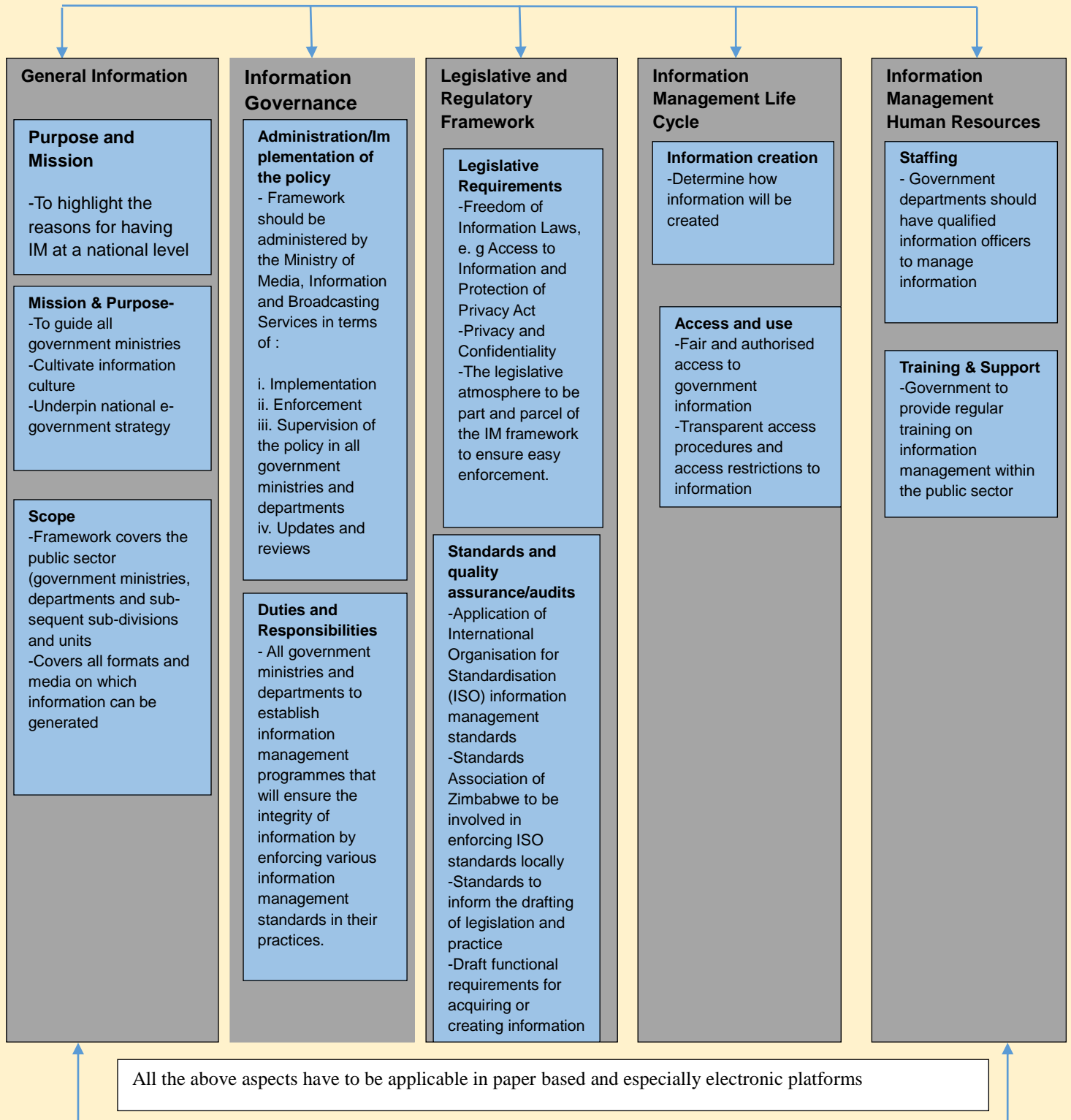
The following framework (figure 1) is proposed in the context of Zimbabwe. The proposed framework is not conclusive, neither is it prescriptive.

Rationale and purpose

The government of Zimbabwe has deliberately adopted the concept of e-government and vast amounts of information have given impetus to the framework. Starting from the early 2000s, Zimbabwe has witnessed a reasonable rate of the spread of ICTs throughout the country, coupled with the ever increasing computer literacy in the country. This has enabled the government to take advantage of this situation to deliberately offer services online in the form of e-government. The spread of ICTs, together with the gradual appreciation of information for decision making, human rights protection and good governance has, on one hand, given new strains to the government to provide improved access to government information by the public, and has improved the manner in which the government interacts with the public, not only with those who are in the country but citizens of the country who are based elsewhere in the world. This has also seen the emergence of a number of platforms for information dissemination, including social media. Zimbabwe currently has twenty six (26) ministries, with each ministry having departments. With the government having pronounced its move to venture into e-government, one can imagine how much information is being generated by the government! This gives the impetus for the development of an IM framework for the Government of Zimbabwe to harness its information and safeguard it as an indispensable resource. The following is a proposed IM Framework outlining the key aspects to be addressed by the framework.

Figure 1: Proposed Information Management Framework for Zimbabwe

PROPOSED INFORMATION MANAGEMENT FRAMEWORK FOR ZIMBABWE



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