



Uganda Open Government data readiness study¹

*Association for Progressive Communications (APC) and The
Collaboration on International ICT Policy in East and Southern Africa
(CIPESA)*

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Table of Contents

Executive Summary.....	5
Open Government Data readiness in Uganda	6
Recommendations for implementing an OGD in Uganda.....	7
1. Introduction.....	9
1.1 About the Study.....	10
1.2 Study Objectives.....	10
1.3 Methodology	11
2. Desk Research.....	11
2.1 Uganda’s Current Status and its Implication on Government Open Data.....	11
2.1.1 Social Status.....	11
2.1.2 Economic Status.....	12
2.1.3 Political and Institutional Status.....	12
2.1.4 Science, Technology & Innovations (STI) Status.....	13
2.1.5 Legal and Policy Status.....	19
Persons and organisations interviewed.....	21
3. Narrative from key informants.....	23
3.1 Awareness about Open Government Data.....	23
3.2 Why Open Government Data.....	23
3.3 Role of Government	25
3.4 Open Government Data and Incidence of corruption.....	26
Institutional Development	26
Legislation	27
Government’s Competence to Implement OGD.....	28
3.5 ICT as an enabler of OGD.....	29
3.6 Capacity to re-use the OGD.....	30
Example of re-use: Visualising Uganda’s aid and budget data.....	31
3.7 Challenges of Accessing & Opening Government Data.....	32
Learning from the Kenya Open Data initiative.....	33
3.8 Recommendations.....	34
4. Conclusions	35
5. References.....	36

LIST OF ACCRONYMS

BTTB	Background to the Budget
HC	Health Center
ICT	Information and Communication Technology
IMS	Information Management System
MDA	Ministries, Directorates, Authorities
NBI	National Backbone Infrastructure
NDP	National Development Plan
NITA-U	National Information Technology Authority –Uganda
NRM	National Resistance Movement
OGD	Open Government Data
OGP	Open Government Partnership
UCC	Uganda Communications Commission

Executive Summary

The Uganda Open Government Data (OGD) readiness study was conducted between January and April 2012 to assess the country's readiness to implement OGD. It primarily engaged senior government officials, mid-level public servants, members of the media, academia, private sector, and donor agencies.

The study involved desk research and key informant interviews. The desk research primarily informed the research about the status of Uganda on a number of issues that would affect the ability to undertake an OGD programme. Developments in various areas - Social, Economic, Political and Institutional Infrastructure, Science Technology and Innovations, Information and Communications Technology and Legal and Policy, were all reviewed. The literature suggested that Uganda was growing in all these aspects and some progress had been noted which offered an opportunity to implement OGD.

The key informant interviews were critical in informing the research from the Knowledge, Attitude and Practice approach with regard to OGD in Uganda. They were essential in providing appropriate insights from the three constituents crucial to the realisation of open data as suggested by Hogge (2010). These are: 1) Top political leadership; 2) Middle level managers; and 3) Civil society. The primary objective of engaging these stakeholders was to gauge the level of commitment, interest, and capability to implement an OGD programme.

This study found that there is readiness to initiate an OGD programme, and this was reflected by the initiatives that have been undertaken, such as the legal and policy environment in place, infrastructure, and appropriate human resources. At the top leadership, it was evident that whereas there was willingness to open up government data, this was yet to translate into clear and total commitment. At the middle level, there existed the competence to implement OGD, but the lack of clear goodwill at the Executive level was an impediment. Fear of the negative effects that the opening up of government data and information might have was noted as a bottleneck. With regard to competence to re-use the data by the public and private sectors, it was evident that there was substantial capacity to use and re-use the open data. One recent private initiative, www.opendatauganda.com, aims to establish an online portal with data in open formats.

The study made a number of recommendations, but most importantly was the call on government to fully commit to open government. The commitment at the top executive level will pave the way for a number of opportunities for government, private and public sectors. Besides, there is need to task a government body, preferably the National Information Technology Authority –Uganda (NITA-U), as the in-charge of championing OGD in the country. There is also need for awareness creation for public officers, citizens, and private sector on the benefits of OGD.

In conclusion, there was substantial evidence to demonstrate Uganda's readiness to implement OGD if only a few structural issues were put in place. It was noted that there exists data collection guidelines and tools and this has implications on the quality of data as well as the output. On the whole, it was recognised that a number of initiatives have been running but without effective coordination and direction. It is imperative therefore that leadership is established to champion OGD in a structured and coordinated manner.

Open Government Data readiness in Uganda

Executive Level

- Uganda has established several institutions to support transparency and accountability, yet there is more to be done with regard to executing their roles.
- Neighbouring Kenya launched its Open Data programme in July 2011 and Uganda has the opportunity to learn from Kenya's experience.
- In July 2011, Uganda's Minister for Finance and Planning attended the preparatory meeting for the Open Government Partnership (OGP) and pledged that Uganda would join the initiative. But when the Partnership was launched on September 21, 2011, Uganda opted out, becoming the only one of the six African countries eligible for membership that did not sign up.
- The legal and policy framework exists to implement OGD, but the challenge lies in actual implementation of the enacted legislation. For instance, the Access to Information Act was passed in 2005 - among the very first in Africa - but it is yet to be made operational.

Public Administration Level

- Information in digital format exists on all ministerial and institutional websites, although often not in reusable format.
- The National IT Authority under the Ministry of ICT has created institutional frameworks and invested in the use of Information and Communications Technology (ICT) in public administration.
- All government ministries have appointed information officers as required by the Access to Information Act but these officials need political support so as to make meaningful information available to the public.

Civil Society Level

- Technical capacity to re-use OGD and substantial demand exists from various data users. Initiatives such as www.opendatauganda.com are an illustration of both the demand and capacity to re-use OGD.
- Although ICT development remains slow in terms of computers connected to internet, the use of mobile phones beyond voice is increasing as demonstrated in the rapid innovations in mobile phone usage.

Recommendations for implementing an OGD in Uganda

Executive Level

- The political leadership at the top level should pronounce their support for opening up data, and follow through with concrete actions on implementing an OGP programme. The presidency, and the finance and planning ministry, should offer unequivocal support and leadership on the open government data programme.
- Commitment to the cause of OGD should include joining the Open Government Partnership (OGP) and commit to a comprehensive set of actions to open up public information.
- Government departments in partnership with civil society groups, should create awareness on the available legislation and policies that empower citizens to access information, such as the Access to Information Act (2005).
- Inconsistent laws such as the Official Secrets Act should be amended to bring them in line with the requirements of increased transparency and openness by public bodies.

Public Administration level

- Develop programmes that help to change the attitudes of public officers on availing information to the public.
- Government could consider starting on a pilot phase, specifically with the primary sectors of the economy. Having in place a government portal that collects and processes information would be a step in the right direction. A domain name such as www.opendata.go.ug, should be created at the earliest. NITA-U should technically champion and host the portal but ensure integration and shared data input from various sectors of government. This portal should be developed through a collaborative approach to create ownership and sustainability.
- There is need to create appropriate standards and open formats for data capture, processing and dissemination.
- Government should hasten the implementation of the interoperability framework along with other frameworks that are yet to be implemented. Investing in shared resources would greatly reduce the current duplication of efforts among government departments.

Civil society groups, academia, donor agencies, and various government departments should be brought together in charting the OGD programme. This should be championed by the Ministry of ICT/NITA-U and the Ministry of Finance and Planning.

- Government departments should make mandatory information disclosures as required by the Access to Information Act (2005), and should file their annual compliance reports demanded by this legislation. The government should promote accessibility to open data for minorities – language options for content and access for the disabled including the hearing and vision impaired.

Civil Society Level

- Current and potential re-use initiatives by the private sector should be publicised to make stronger the benefits of opening up data.
- Initiate dialogue among various stakeholders about the importance of sharing information and its benefits to the public.
- Undertake research to establish citizen's information needs and barriers to information use and re-use. Seek public-private partnerships to encourage innovation. This will lead to ventures for the worthwhile re-use, re-distribution and universal participation in OGD such as applications development and eServices provision.

1. Introduction

The use of Information and Communication Technologies (ICT) continues to grow in Uganda. Up to 99 per cent of the country is covered by the telephone network, and tele-density stands at 45 per cent. Moreover, internet use is also growing, with 850,200 mobile and 84,558 fixed internet subscribers (translating into approximately 4.5 million internet users), fuelled by greater availability of fibre optics, affordability of internet-enabled mobile phones, and a growth in service providers.

Since passing the ICT policy in 2004, the Uganda Government has placed increasing attention to the role of ICT in national development. This has been manifested in several laws that have been enacted, the creation of a Ministry of ICT in 2006, and investments in ICT infrastructure. These factors combined should aid the Government of Uganda in implementing an Open Government Data (OGD) programme. Opening government data is a crucial part of open government / governance and for Uganda would provide a crucial launch pad that would put it on a par with the open democracies that have joined the OGP. There are several attributes of open data that make it a desirable undertaking by governments that are keen on improving governance. Open data is data that can be freely used, reused and redistributed by anyone, normally subject only to the requirement to attribute and share-alike (Open Data Handbook). Why should Uganda open up government data? Because implementing OGD has been proven to increase transparency in the conduct of public affairs, undercuts corruption, enables citizens to reuse this information to deliver improved products and services; and leads to improvements in the delivery of education, health and water to citizens.

ICT is presenting a number of opportunities and alternative options in the delivery of services both from public and private sectors. The value delivered over these technologies regarding service delivery is growing, especially in terms of efficiency and effectiveness. Because of these capabilities, the demand for transparency and accountability through the use of ICT is increasing. The Open Government Partnership (OGP) is one of the initiatives tapping into the capabilities of ICT because it presents platforms and possibilities to improve government accountability and responsiveness. The OGP, a multilateral initiative led by the U.S. and Brazilian governments, aims “to secure concrete commitments from governments to promote transparency, empower citizens, fight corruption, and harness new technologies to strengthen governance”.² Whereas Uganda was one of six African countries invited to join the initiative due to the strides it had already made towards becoming an open and democratic society, the Uganda government in September 2011 surprisingly, and for reasons not made public, declined to join the OGP. All the other African countries invited to join - Kenya, Liberia, Ghana, South Africa, Tanzania – gladly embraced the OGP.

In a seminal study conducted by Becky Hogge (2010), she states that “there are substantial social and economic gains to be made from opening government data to the public. The combination of geographic, budget, demographic, services, education and other data, publicly available in an open format on the web, promises to improve services as well as create future economic growth.” But to make government data open requires a holistic approach because it involves many stakeholders. Lee and Kwak (2011) recommend that the implementation of government open data initiatives

² To see what countries are part of the Open Government Partnership, and what actions they are taking to increase openness, please see www.opengovpartnership.org/

should be incremental because each stage is important. Accordingly, they propose a model that requires incremental implementation of the OGD initiative. The model presents four stages of implementation before full open government data is attained.

Stage One: Increasing Data Transparency

Stage Two: Improving Open Participation

Stage Three: Enhancing Open Collaboration

Stage Four: Realising Ubiquitous Engagement

At each of these stages, the level of engagement and participation increases as one progresses to the next stage. Fundamental to this model is data transparency as the essential stage for OGD; the other stages are dependent on available data in formats that enable the realisation of the subsequent stages. This points to the need for countries such as Uganda to implement comprehensive open government data projects in succession as they move towards higher levels of engagement and civic participation, through the use of ICT.

Moreover, it needs to be noted that merely making information public does not amount to implementing OGD. Rather, there are a range of attributes of open data, as elaborated in The Open Data Handbook, which countries such as Uganda need to adhere to as they rollout their initiatives:

- **Availability and Access:** the data must be available as a whole as and at no more than a reasonable reproduction cost, preferably by downloading over the internet. The data must also be available in a convenient and modifiable form.
- **Reuse and Redistribution:** the data must be provided under terms that permit reuse and redistribution including intermixing with other datasets.
- **Universal Participation:** everyone must be able to use, reuse, and redistribute - there should be no discrimination against fields of endeavour or against persons or groups. For example, 'non-commercial' restrictions that would prevent 'commercial' use, or restrictions of use for certain purposes (e.g. only in education), are not allowed.

Barack Obama's presidential campaign and the US Open Government Directive of December 2009 profoundly changed the way governments of the whole world are conceiving the role of ICT in the Public Sector. Obama's Directive directly (and almost immediately) influenced policy making in most OECD countries and also contributed to the growth of bottom-up initiatives for openness, collaboration and transparency all around the world. (Reggi 2012)

1.1 About the Study

This study assessed Uganda's readiness to open up government data. It explored three basic tenets with regards to readiness: Knowledge, Attitudes and Practice. In undertaking a study of this nature, it was imperative to appreciate how knowledgeable the key actors were about the subject matter, their attitudes towards the subject matter, and the current practices.

1.2 Study Objectives

The study's overall objective was to assess the Government Open Data Readiness in Uganda, and to recommend actions needed for the country to implement an OGD and move to the openness levels which countries such as those grouped under the Open Government Partnership initiative are working to attain.

1.3 Methodology

This study involved a two pronged approach, starting with desk research. The desk research considered literature on OGD, with a particular interest on initiatives in Uganda. This foundation was crucial in undertaking the in-depth interviews with the key informants. The in-depth interviews focused on ascertaining the level of awareness and knowledge about open government data, the expected value of opening government data, the capability of government to implement open government data, what would be required for government to meaningfully open up its data, and the current – and potential – reuse of public data by government and the private sectors.

2. Desk Research

In conducting this study, it was deemed useful to contextualise the desk research into two components i.e. the current status at a country level and more specifically from an Open Data perspective.

There is limited research that has been undertaken to study the critical issues in open government (Lee and Kwak 2011). This signifies that the area of study is relatively new and yet to attract substantial attention from researchers. Indeed, as of March 2012, only 54 countries have committed to join the Open Government Partnership (OGP). Of these, only eight have delivered their commitments and the rest are still working on the commitments to be delivered (OGP 2012). The partnership is open to all countries although acceptance as a member of the partnership requires a country to make specific commitments with regard to opening up data to the public.

2.1 Uganda's Current Status and its Implication on Government Open Data

Uganda is one of the six African Countries eligible to participate in the Open Government initiative. The other African countries currently eligible to join the OGP are Kenya, Liberia, Ghana, South Africa and Tanzania. Of the six, only Uganda has not joined the partnership. These countries derived their eligibility from their "demonstrated commitment to open government" in the key areas of budget transparency, access to information, asset disclosure by politicians and officials, and citizen engagement (CIPESA 2011).

In assessing Uganda Open Government Data readiness, key variables with an overarching impact on the successful implementation of the OGD were reviewed. In the next pages, we explore these variables, but it should be noted that these variables do not denote a model and are not presented in order of importance.

2.1.1 Social Status

Uganda has made significant strides in improving the social status of her 34 million citizens. Life expectancy in 2009 stood at 53 years (World Bank, 2012), which is the highest attained since 1960. Meanwhile, the literacy rate has equally been rising, reaching 73 per cent in 2010 compared to 68 per cent in 2002. The introduction of Universal Primary Education (UPE)³ and Universal Secondary Education (USE)⁴ has contributed to the improvement in literacy. The proportion of the

³ Universal Primary Education (UPE) was introduced in 1997 by the Government of Uganda to allow all school going children to access free education at primary level. Initially it started with four children per family; however this restriction was amended to allow all school going children to benefit from this program in 2007.

⁴ Universal Secondary Education (USE) was introduced in 2007 to increase on transition rates between Primary and Secondary education. This was intended to enable students who had completed UPE but could not proceed

population with access to improved water sources currently stands at 70 per cent and 92 per cent for rural and urban areas respectively (BTTB; 2011/12). From a social dimension, Uganda has made significant progress and this has implications for both data reuse but also for citizen's participation in governance.

2.1.2 Economic Status

Uganda's economy is among the fastest growing in Sub-Saharan Africa. For the financial year 2010/11, Uganda posted a 6.3 per cent GDP growth (BTTB; 2011/12). The agricultural sector employs close to 80 per cent of the population and for a long period was the highest contributor to the national GDP. This has since changed, with the services sector leading as the highest revenue earner for Uganda. The share of agriculture, forestry and fishing to GDP stood at 13.9 per cent in 2011/12. On the other hand, the share of services increased to 52.4%, and industry 25.3%, highlighting the growing importance of these sectors (BTTB; 2011/12).

The population living below the poverty line is estimated at 7.5 million people, or 25 per cent of the population. Uganda has thus managed to achieve the Millennium Development Goal of bringing down the population below the poverty line to 28 per cent by 2015. The economic outlook remains bright, and from an OGD perspective this demonstrates, for one, the potential demand for data that enables informed decisions, especially with regard to investment opportunities.

2.1.3 Political and Institutional Status

Most of Uganda has experienced peace over the last two decades, with the notable exception of parts of northern Uganda where there was a rebel insurgency between 1998 and 2005. The country has had four consecutive elections since 1996 as required by the constitution. The three arms of government (the Executive, Judiciary, and Legislature) are operational, with each possessing discretionary powers, and relative independence, over the others. Until 2006, Uganda was governed under a system that barred political parties from competing for political power. Though multi-party democracy was restored, the 2005 constitution was amended to remove term limits, which has enabled President Museveni – in power since January 1986 – to win more terms in office. The ruling party he leads, the National Resistance Movement (NRM), in its manifesto for the 2011-2016 period, states that “the NRM is fully committed to promoting and upholding democracy and good governance, first as a core value, but also as a sine qua non for national transformation”.⁵

Government Objectives

Government objectives are derived from the National Development Plan (NDP) for (2010/11 – 2015/16) and are listed as follows:

- a) Increasing household incomes and promoting equity;
- b) Enhancing availability and quality of gainful employment;
- c) Improving stock and quality of economic infrastructure;
- d) Increasing access to quality social services;
- e) Promoting Science, Technology, Innovation & ICT to enhance competitiveness;

to secondary school because of lack of school fees.

⁵ www.nrm.ug/2010-2016-manifesto

- f) Enhancing human capital development;
- g) Strengthening good governance, defence and security; and
- h) Promoting sustainable population & use of the environment and natural resources.⁶

Equally important is the ruling party manifesto, which to an extent influences the country's governance and development agenda. The current manifesto aspires to achieve the following:

- a) Peace, security, law and order, as well as equality of all citizens before the law;
- b) Legitimacy of government, based on the consent of those who are governed through free, fair, and regular elections;
- c) Existence of constitutional democracy where there is a separation of powers between Executive, Legislature and Judiciary;
- d) Accountability, transparency and fight against corruption in all spheres of public life, especially in public service;
- e) Competent government to formulate appropriate policies and implement them effectively; and
- f) Availability of information and freedom of media.

The NRM Manifesto is inclined to the OGD principles, particularly points (d) and (f).

2.1.4 Science, Technology & Innovations (STI) Status

The Government of Uganda believes that the socio-economic transformation depends on the application of Technology, Research and Innovations (BTTB; 2011/12). The government established the Uganda National Council of Science and Technology (UNCST)⁷ to spearhead and coordinate the research effort through availability of research funds. The Uganda Industrial Research Institute (UIRI)⁸ was established to translate research into products and this financial year funds have been available to open up four multipurpose business incubation centres. Government efforts under the Presidential Support to Scientists Initiative are also beginning to bear fruit. Government, through UNCST, has successfully supported value-addition projects by Ugandan scientists (BTTB; 2011/12).

Information & Communication Technology Status

The NDP has positioned ICT among the primary sectors that will drive the economy. The BTTB (2011/12) states that ICT continues to play a major development role both in its own right as a sector and as a facilitator in the development of other sectors. This sector is estimated to have grown by 30 per cent in the financial year 2010/11.

⁶ npa.ug/docs/NDP2.pdf

⁷ Uganda National Council of Science and Technology (UNCST); www.uncst.co.ug

⁸ Uganda Industrial Research Institute (UIRI); www.uiri.org

The telecommunications sector is the fastest growing sector, posting a 40 per cent growth in the financial year 2010/11 (UCC; 2012). With more than 15 million mobile subscribers, Uganda boasts a tele-density above 45 per cent. There are five Mobile Telecom Operators (MNOs) in the country with each providing both voice and data services. This growth in mobile telephony has brought new possibilities to the economy. Across the country, citizens are now using mobile phones not only to make voice calls but also data, to have improved access to market information and other services.

Mobile phone usage beyond voice

Mobile handsets are increasingly becoming more than just tools for voice communication and short messaging; they are also tools that allow generation, storage and transmission of multimedia content, and also allow for fast access to the internet (CIPESA: 2011). They are used as commercial tools to transact businesses as well as development tools to improve efficiency of service delivery. It is believed that these new services are now emerging as strong subscription drivers leading to the growth in mobile phone users. The most prominent service has been mobile money – a term used to refer to money stored using the SIM (subscriber identity module) as an identifier as opposed to an account number in the conventional banking sense (Ndiwalana 2010). Currently, Uganda, Kenya and Nigeria are the only countries in the world with more than one million mobile money account holders.

Indeed, UCC attributes the growth in mobile phone subscriptions in Uganda to; cut throat pricing practices founded on low tariff on-net call bundles that fostered multiple SIM ownership; abundance of multiple SIM handsets and new subscription demand created by new services such as mobile money transfers and utility payment options. Approximately 45% of subscribers were reported to have more than 1 SIM card in 2011 (UCC 2011).

Currently four MNOs offer mobile money services. This service has enabled school fees settlement schemes, payment of utilities like water, electricity, and TV subscriptions.

Mobile phones also continue to spur innovations in other sectors with applications developed to improve the delivery of public services. In the health sector, users are now able to receive text reminders to take medications, report health workers' absenteeism and monitor treatment of patients. Initiatives such as SMS campaigns to create awareness about health related issues, such as HIV/AIDS and Tuberculosis, are being undertaken in Uganda.^{9 10} The education sector has not been left behind. UNICEF is working with the Ministry of Education and Sports to monitor the quality and safety of schools using SMS. Information such as teacher absenteeism, violence against children in schools, and functionality of water points in schools is monitored.¹¹ This is making it easier for government to target interventions and also provide greater accountability to communities in terms of the quality of education availed to their children.

Mobile telephony has also been used in democratic processes, from mobilising voters; voter registration; election monitoring and reporting voting irregularities to reporting on service delivery issues in the country. This was mainly witnessed in the February 2011 elections, where innovative platforms such as Uchaguzi and Uganda Watch 2010, crowd sourced information through SMS alerts from citizens reporting on election irregularities. Also, the Electoral Commission had an SMS

⁹ HIV status known among women in Uganda; www.texttochange.org/news/hiv-status-known-among-women-uganda

¹⁰ Stop TB by using interactive mobile communication; www.texttochange.org/news/stop-tb-using-interactive-mobile-communication

¹¹ Innovations; www.unicef.org/uganda/9903.html

platform where voters verified their voting details. An SMS short code accessible across all mobile networks allowed voters through their voter-ID number to verify the polling station, parish and sub-parish where they had registered to vote.¹² These innovations can be used to spur developments in open data in Uganda.

Internet access and use

Internet access via computers is not growing as fast as mobile phone accesses, although government is putting in place mechanisms to ensure more affordable access. With 850,200 mobile and 84,558 fixed internet subscribers and the cost of bandwidth coming down, the numbers are bound to grow in the coming years. Uganda Communications Commission (UCC) reported more than 4.5 million internet users as of July 2011. Government has invested substantially in the sector - specifically connectivity - which is one of the fundamental requirements for OGD. The table below shows the status of connectivity as of July 2011.

Table 1: Internet Service Access July 2011

Category	Coverage
Geographical coverage	Near National GPRS and Edge Coverage
	76, 80 km CDMA Points of Presence
	Wimax in Kampala metro
	National VSAT coverage
Govt MDA	33 MDAs connected to e-government infrastructure
Local Government Administration Units	78 local government administrations connected to the internet
Government Hospitals and Health centres	53 hospitals connected to the internet
	50 Health Centre IV facilities connected to internet
Public and Private Universities	31 universities connected to the internet
Government Secondary schools	708 ICT laboratories in secondary schools

Source: UCC 2010/11 Posts & Telecommunications Market Review

Universal access Fund investments

Uganda established the Rural Communications Development Fund (RCDF)¹³ under UCC, charged with bringing access to the hard to reach areas. This is in line with the Universal ICT Declaration which requires member states to develop appropriate structures and strategies to ensure inclusion with regard to access to ICTs. ¹⁴ RCDF has over the years supported the deployment of relevant ICTs to the communities that are non-commercially viable to the private players in the sector. By mid-2011, the RCDF had implemented these projects; 76 Internet points of presence, 106 Internet cafes, 78 ICT training centres, 4,099 Public payphones, 78 district web portals, 13 Multi Purpose Community Tele-centres (MCT), 45 Postal projects, 708 School ICT laboratories, 174 Health ICT facilities, 90 voice network sites, 106 content development projects, two local governance projects, and 31 other projects.

Usage of ICT by government departments

¹² IFES February 2011; New Media Technology Debuts in Uganda Election, www.ifes.org/Content/Publications/Articles/2011/New-Media-Technology-Debuts-in-Uganda-Election.aspx

¹³ RCDF; www.ucc.co.ug/index.php?option=com_k2&view=item&layout=item&id=56&Itemid=59

¹⁴ www.itu.int/ITU-D/wtdc06/DohaDeclaration.html

The Government of Uganda has the appropriate basic technological infrastructure in place to enable the implementation of Open Government Data. Every government ministry and agency currently has basic hardware and applications and is connected to the internet. The national infrastructure network still has a low coverage to enable widespread access and hence bandwidth is extremely slow and costly. Although important to note is that the private sector has played a substantial complimentary role in enabling and promoting access of government services. The establishment of the undersea submarine fibre optic cables at the East African coast has tremendously brought down the cost of access to internet. Before 2009¹⁵ Uganda relied on satellite connections to connect to the internet. Uganda is currently served by three submarine fibre optic cables i.e. Seacom, eSSAY, and TEAMS and these have substantially brought down the cost of access. Uganda still maintains the satellite infrastructure which is essential to providing the necessary robustness and redundancy required to ensure that services are not disrupted through, for instance, submarine fibre cable cuts.

The government has also made some significant investments in developing infrastructure. In 2011, the government commissioned the National Data Centre as part of the IT Infrastructure. It is envisaged that this infrastructure will host the key government applications starting with secure messaging and collaboration systems. The government also launched the National Backbone Infrastructure (NBI) with about 1,536 kms of fibre optic cable. This has a transmission site connecting 22 transmission sites¹⁶ across the country from East (Kenya) connecting to the under-sea internet cables to Nimule (border with South Sudan). Phase I of the NBI has been completed and involved the laying of 168Kms of fiber optic cable to link five (5) towns; Mukono, Bombo, Entebbe and Jinja to Kampala.¹⁷

Although government departments in Uganda do not have a long tradition of using ICT to promote public information openness, over recent years, they have endeavoured to leverage on web portals, social networking sites; media and public library systems to put more information in the public domain. For some departments this includes documents on expenditure, procurement, budgets and areas invested in. Table 2 below gives information on some of the information available via ICT on the digital platforms (i.e. websites), from selected departments. The table is not exhaustive; a number of other government agencies not listed in the table also use ICT to avail public information.

The attempts and extent of making government data open through ICT are limited to each department. The general indication is that accessible, complete, up-to-date and easily understandable information is rarely available. Furthermore, despite citizens speaking various dialects, English remains the primary language used by government agencies.

The table shows that development and integration of ICT within Uganda's public sector to promote public information openness is un-even, probably due to disparities between individual departments, inadequate resources dedicated to ICT and the lack of common standards.

¹⁵ The year when the first live connection to the submarine cable was made from Uganda by Seacom www.seacom.mu

¹⁶ Data transmission site is a location at which data terminates for transmission to the National Data Centre

¹⁷ NBI/EGI Project: www.nita.go.ug/index.php/projects/nbiegi-project

Table 2: Examples of government departments' use ICT and the data availed within

Department	Website	Twitter	Facebook	Other Media
The Parliament of Uganda: MPs Directory, Reports, statements, weekly summaries of proceedings, bills, motions, petitions, schedule of meetings and order papers. ¹⁸	√	X	√	<ul style="list-style-type: none"> • Public and Media centre • Newspaper supplements • Radio & Television • Newsletter • Live broadcasts
Uganda Bureau of Statistics (UBOS) compiles the country's economic, social and demographic statistics. ¹⁹	√	X	X	<ul style="list-style-type: none"> • Publications • Reports
The Uganda Communications Commission (UCC) is the independent regulator of the country's telecommunications industry. It is also mandated to promote sector developments. UCC avails information about the regulatory process, consumer rights, licensed providers and fees. ²⁰	√	X	√	<ul style="list-style-type: none"> • Publications • Press releases • Radio & Television • Newspaper
Local governments: Under the universal policy, UCC set out to develop, among others, a national web portal as well as one for each district in Uganda. ²¹ The aim was to provide vital and up-to date information, activities and opportunities to the citizens on health, agriculture, education, government and politics, investment, trade, tourism, government programmes, environment, SMS services, infrastructure, news and district leader profiles as well as their contacts. 78 portals were commissioned and installed as at July 1, 2010. Many of the portals are currently inactive.	√	X	X	
The Uganda National Roads Authority publishes information on the costs, duration and contract details of its ongoing projects. The authority also publishes road works updates and strategic plans. ²²	√	X	X	<ul style="list-style-type: none"> • Newspapers • Radio & Television
Uganda Revenue Authority (URA) publishes its quarterly gains and losses, net taxes collected and also the international trade performance. In addition, monthly performance updates and tax collection. They also update their exchange rates for imports, exports and VAT, and convey, through	√	X	√	<ul style="list-style-type: none"> • Circulars • Notifications • Information

¹⁸ Parliament of Uganda, www.parliament.go.ug/ and www.facebook.com/pages/Parliament-of-Uganda/143025725712907?sk=info

¹⁹ Uganda Bureau of Statistics (UBOS), www.ubos.org/

²⁰ Uganda Communications Commission (UCC), www.ucc.co.ug/ and www.facebook.com/pages/Uganda-Communications-Commission/198825083515412

²¹ UCC, Rural Communications Development Fund (RCDF), www.ucc.co.ug/rcdf/rcdf_policy2011_2015.pdf

²² Uganda National Roads Authority (UNRA), www.unra.go.ug/

press releases, circulars and notifications recent changes to transit goods licences, transfer prices etc. Their information library consists of bill amendments, tax laws, regulations, tax guides, general information and key contacts. ²³				library
				<ul style="list-style-type: none"> • Press releases • Radio & Television • Newspapers
The Ministry of Foreign Affairs website has information on Uganda's foreign policy, tenders, immigration and visas. ²⁴	√	x	x	<ul style="list-style-type: none"> • Blog • Publications
The Inspector General of Government avails information about on-going corruption cases/investigations, verdicts on concluded cases, arrests by the inspectorate and appeals. ²⁵ The IGG website supports online petitioning and reporting of cases.	√	X	√	<ul style="list-style-type: none"> • Publications • Reports • Newsletter
Ministry of Finance, Planning and Economic Development publishes the national budget and framework, performance reports, fund releases, returns/balance and public investment plans. ²⁶	√	√	√	<ul style="list-style-type: none"> • Reports • Publications
The Ministry of Education and Sports Information website has statistics about the education sector ²⁷	√	x	x	<ul style="list-style-type: none"> • Publications • Reports
The Uganda Police Force issues alerts, press releases and activity schedules through its website and social media. Annual crime reports are also posted. ²⁸	√	√	√	<ul style="list-style-type: none"> • Press releases • Radio & Television

²³ Uganda Revenue Authority (URA), www.ura.go.ug/ and www.facebook.com/URApag

²⁴ Ministry of Foreign Affairs, www.mofa.go.ug/

²⁵ Inspectorate of Government (IGG), www.igg.go.ug/ and www.facebook.com/IGGuganda?sk=info

²⁶ Ministry of Finance, Planning and Economic Development, www.finance.go.ug/; twitter.com/#!/mofpedu and www.facebook.com/pages/Ministry-of-Finance-Planning-and-Economic-Development-Uganda/134471723319085

²⁷ Ministry of Education and Sports, www.education.go.ug/home.html

²⁸ Uganda Police Force, www.upf.go.ug/index.php, twitter.com/#!/ugandaupf/ and www.facebook.com/ugandapoliceforce?sk=wall

2.1.5 Legal and Policy Status

Uganda has the appropriate legal and policy environment to enable the implementation of Open Government Data.

The Access to Information Act 2005

The Access to Information Act (2005) provides for the right to access to information pursuant to Article 41 of the Constitution; and it prescribes the classes of information referred to in that article and procedures for obtaining access to that information. This Act provides a legal framework that should enable Uganda to implement its OGD programme, and although the regulations governing the opening up of information are not extensive enough, the Act is a firm legal foundation for opening up. The Act does provide the appropriate foundation and mandate to enable government to make its data/information public and based on this it is possible for government agencies to make this information public.

Article 41 of the Constitution of Uganda states that every Citizen has a right of access to information in the possession of the State or any other organ of the State except where the release of the information is likely to interfere with the security of the State or the right to privacy of any other person

The purpose of this Act is to:

- Promote an efficient, effective, transparent and accountable government;
- Give effect to Article 41 of the Constitution by providing the right to access to information held by organs of the state, other than exempt records and information;
- Protect persons disclosing evidence of contravention of the law, maladministration or corruption in government bodies;
- Protect transparency and accountability in all organs of the state by providing the public with timely, accessible and accurate information; and
- Empower the public to effectively scrutinise and participate in government decisions that affect them.

In June 2011, the government passed regulations to operationalise the Access to Information Act 2005.²⁹ However, some provisions make access costly and difficult and, as such, they are not in the spirit of the strong right to information provision found in the Constitution.³⁰

In accordance with this law, all government ministries have appointed information officers. In addition, government designated the Minister in charge of information to manage implementation activities. The Directorate of Information and National Guidance in the Office of the Prime Minister is the Nodal agency spearheading this task. But as a senior officer working on implementing this law confesses, much remains to be done in implementing the law:

Although ATIA and other related laws exist, they have not yet been maximally utilised, since challenges of dissemination and use of information still exist, hence the need to build capacity for increased information access. Building capacity requires concerted effort, ranging from

²⁹ Uganda Issues Regulation to Implement Access Statute, www.freedominfo.org/2011/06/uganda-issues-regulation-to-implement-access-statute/

³⁰ Gaia Larsen, Carole Excell and Peter G. Veit (June 30, 2011) Uganda's Access to Information Regulations: Another Bump in the Road to Transparency, World Resources Institute

*empowering masses to exercise their right, restructuring systems, development of human resource and enhancing institutional capacity to handle information more effectively.*³¹

In order to have a well managed process, it is important to have in place procedures and processes for archiving and dissemination of this information. This calls for a strategy to ensure that this is done in an appropriate manner. Magara (2007) states about the Right of Access to Information Act 2005: "(Article 5 and 6) lays a foundation for the development of such a strategy for archiving and dissemination of public information. In addition, a preservation of records (Article, 21) and protection of information (Article 26) are clear indicators of an effective archival and dissemination strategy."

Information Management Services (IMS) Policy³²

Government intends to consolidate its efforts and focus its energies to harness the vast information resources to facilitate improved service delivery provision and ease of access to information by the citizenry. Information management is one of the core components of government infrastructure. The Uganda Government formulated a policy that would facilitate this reality - the Information Management Services Policy. A scan in Government Ministries, Departments and Agencies (MDAs) reveals that there are varying efforts to embrace Information Technology to support Information Management for effective service delivery. However, these efforts are uncoordinated and haphazard, thus leading to a proliferation of stand-alone systems which lack interoperability.

The National Development Plan (2010), objective 4, calls for enhancement of access to quality, affordable and equitable information services country wide. In the same vein, the draft National IT policy (2010) for Uganda under the IT infrastructure objective, strategy 6, calls for automation of government processes and procedures to bring about transparency, reduce constraining controls, increase efficiency and productivity and reduce cost of service delivery.

The draft Uganda National e-government framework (2010)³³ addresses the importance of IMS. Under section 1.1.1 (v), it states that the whole of government information architecture is a catalyst to governing all Ugandans in an open, effective, and efficient manner that also ensures a sustainable future.

The country still has weak legislation pertaining to the ICT industry. Laws related to Intellectual Property Rights, Data Security, Privacy, Data Protection and cyber-crimes are still in their infancy and where they exist, enforcement is still low and others are outdated.

Interoperability framework: The National Information Technology Authority of Uganda (NITA-U) has developed the interoperability framework and roadmap for the next five years. The roadmap recognises that currently government systems are scattered with each government entity running independent IT infrastructure and systems; and believes in the next five years it will have in place government systems that enjoy shared IT infrastructure services, interoperable systems in all MDAs and local governments. This is expected to lower the maintenance costs. NITA-U targets to have at least 80 per cent of all MDA and local government offices interconnected within five years.

³¹ Remarks by Sylvia Nakabugu Biraahwa, Principal Information Officer, Directorate of Information and National Guidance, at Eastern Africa Consultation on the African Charter on democracy, Elections and Governance, Nairobi, Kenya, November 2011

³² www.nita.go.ug/uploads/Draft_IMS_Policy.pdf

³³ www.nita.go.ug/uploads/Final%20Draft%20E-govt_framework_June%202010.pdf

Persons and organisations interviewed

One of the key components of this study was the conduct of key informant interviews. Interviewees were drawn from Government agencies, international agencies, NGOs, the private sector, and academia. The table below shows the distribution of respondents according to sector representation:

Table 2: Number of Respondents per Sector

Sector	No.of Respondents	%
Government Agency	7	35.00
International Agency	2	10.00
NGO	2	10.00
Civil Rights Advocacy	2	10.00
Private Sector	2	10.00
Media	2	10.00
Academia	3	15.00
Total	20	100

These were purposively selected depending on the role they play in their respective organisations but most importantly their potential value with regard to supporting the implementation of Open Government Data initiatives. In order to engage the respondents meaningfully, the subject matter was introduced, key concepts defined and the background of the study presented. This was meant to enable the respondents appreciate the initiative. The respondents were a representative sample of the three tier approach of assessing OGD readiness as proposed by Hogge (2010) i.e.

- A top-level mandate motivated by either an outside force
- An engaged and well-resourced 'middle layer' of skilled government bureaucrats; and
- Civil society, and in particular a small and motivated group of 'civic hackers'

Engaging at all these levels is imperative in the implementation of OGD. As Tim Berners-Lee (Cited in Hogge 2010) observed in an interview; 'It has to start at the top, it has to start in the middle and it has to start at the bottom.'" For the developing economies, there is a fourth player and that is the donors. They play a significant role in shaping the availability of data, and we accordingly involved them in the study. The structure of the in depth interviews was based on three strands i.e. Knowledge/Awareness about OGD; Attitudes - general perception about OGD and willingness to participate and; Practice - willingness to implement.

Top Layer: this comprises organisations/departments/individuals responsible for policy formulation and decision making at the political/administrative level for the government.

- John Muwanga, Auditor General, Office of Auditor General
- James Saaka, Executive Director, NITA-U

The Auditor-General is an independent authority whose powers, duties and responsibilities derive from the 1995 Constitution of the Republic of Uganda, the Public Finance and Accountability Act

2003 and the Local Authorities Act 1997. Its vision is "to audit and report to parliament and thereby making an effective contribution to improving public accountability and value for money spent."

Middle Layer: Skilled government bureaucrats/agency heads

- Julius Torach, Director e-Governance, NITA-U
- Mukooyo Humphrey, Acting Assistant Commissioner, Communication and Information Management; Ministry of Education and Sports.
- Sam Muhanguzi, eGovernment Manager, NITA-U
- Caroline Kyoziira, Principal Biostatistician, Ministry of Health

The National Information Technology Authority – Uganda (NITA-U) was established under the NITA –U Act 2009, to coordinate and regulate information technology services in both government and the nation. NITA –U is under the general supervision of the Ministry of Information and Communications Technology.³⁴

The Civil society layer: The civil society/Academia/donor agencies/media/ICT companies/entrepreneurs

Academia

Drake Mirembe, Head, Center for Innovations and Professional Skills Development, Makerere College of Computing and Information Science, Makerere University

Dr. John Quinn, senior Lecturer/Researcher, Makerere University College of Computing and Information Science

Donor

- Sean Blaschke, UNICEF
- Edward Anderson, ICT Policy Specialist, World Bank Uganda

Media/ civil society

- Gilbert Sendugwa, Coordinator, Africa Freedom of Information Centre³⁵:
- Grace Natabaalo, Program Associate, Africa Centre for Media Excellence (ACME).
- Mark Brough, Research Officer, Publish What You Fund

Africa Freedom of Information Centre is a pan-African NGO and resource centre that promotes the right of access to Information through comparative research, coordinating regional advocacy, facilitating information-sharing and capacity building. Meanwhile, ACME is a Kampala-based non-profit organisation that helps journalists to seek and achieve excellence and improve journalism.

Private sector

- Daniel Stern, Director, Hive Colab
- Ali Ndiwalana, Research Lead, Grameen Foundation/ AppLab Uganda
- Reineir Battenberg, Director, Mountbatten

ICT entrepreneurs

³⁴ NITA- U; www.nita.go.ug

³⁵ Africa Freedom of Information Centre; www.africafoicenter.org

- Patrick Adengo, Business Technology Consultant, Stalworth Group
- James Wire Lungabho, ICT Consultant, Linux Solutions

Kenya Open Data Initiative: Besides the above Uganda-based stakeholders, this study also benefitted from conversations with Linet Kwamboka, the lead on the Open Data initiative at the Kenya ICT Board. Kenya is a leader in Africa as far as OGD is concerned, and being a neighbour to Uganda with nearly a year’s experience of implementing OGD, it was only natural that Uganda should learn from Kenya in rolling out OGD.

3. Narrative from key informants

3.1 Awareness about Open Government Data

The majority of respondents had an idea about Open Government Data, and clearly understood what it stands for. Their understanding was demonstrated by the appreciation of the values presented by OGD in enabling national development. All respondents commented that government data is public data and therefore should be made available to the public. James Wire and Patrick Adengo mentioned that times are changing and OGD is the latest, desirable trend with regard to governance. John Muwanga, the Government Auditor General, recalled that when he was the Accountant General he initiated the publication of government disbursements to MDAs and local governments and the practice is still in place.

"It is now that I realise that I have been practising OGD. This practice enabled officers and citizens to have access to information that their superiors would withhold for whatever reason. The number of complaints tremendously went down because leaders could be put to task to account what has been received for service delivery." (John Muwanga; Auditor General of Uganda).

The high level of awareness of what open government data means or implies is an indication that the core of what OGD is all about, and the value that it can deliver, is not alien to the stakeholders that would be instrumental in implementing open government programme initiatives in Uganda.

3.2 Why Open Government Data

All respondents agreed that government should open up its data to the public because of the associated benefits. James Wire and Adengo state that OGD would enable citizens to demand more with regard to value for taxpayers’ money. James Saaka and Daniel Stern stated that there was a lot of data within government that is not accessible by the public, which does not provide value to government through its continued concealment. Yet that information could be put to use by citizens if it were placed into the public domain.

Excerpts of e-mail Exchange on OGD;
(sourced from I-Network)

Hello,

I wonder if anyone here might have recent estimates to the following indicators:

of PCs (and other PC-like gadgets) in the country
Amount of Bandwidth in (or is it available, to) the Country IT/ICT Graduates

UBOS should be able to help. Don't have website link, but you could google...

Kindly share with me those stats if you happen to get them. I've previously cried about how it's so hard to find data on particular things in Uganda.

This is where the OpenData initiative comes in handy because am sure if we had access to the Tax man's info and other Gov agencies we could aggregate it and come up with all these matrix on the fly.

"Yes, Government should open its data. There is a lot of information that government is keeping and people would benefit from it. For example, if I was a stationery dealer I would like to know how much government spends so that I can also plan to participate in supplying government. We are keeping a lot of information and that is why we have a lot of corruption taking place." **James Saaka, Exec. Director NITA-U**

Besides the information in itself being potentially valuable once opened up, there was also the great possibility to add value to it:

"It is important that government ministries open up their silos of data to the public so that people can add value; left in its state that information or data is useless. Opening government data enables people to bring on board their expertise to add value to the data by developing appropriate solutions" **Daniel Stern, Director Hive Colab**

Torach, the e-Government Director at NITA-U, said when people have access to information they are empowered and can hold those in authority to account. However, Kyoziira, the health ministry biostatistician, was cautious and said this should be done with precaution:

Government should open up analysed data on critical indicators for purposes of sharing with stakeholders about the status of the country. But care should be taken and standard operating procedures followed as far as raw data is concerned. **Caroline Kyoziira, Principal Biostatistician, Ministry of Health**

Some studies conducted in Uganda have confirmed some of the positive attributes of OGD referred to by the officials interviewed in this study. A study in Uganda by Hubbard (2007) looked at the impact of publishing of school capitation grants. This study revealed that "Each time the Ministry of Finance released money it informed the local media, and it also sent a poster to each school setting out what it should be getting. ... Now, instead of only 20 percent getting through to schools, 90 per cent was getting through ... the new survey showed that schools with access to newspapers now received an 8.68 per cent greater share of their entitlement than schools that did not have access to newspapers. Because schools with access to newspapers had actually received less money in 1995 than schools without, the difference in improvement between schools was slightly higher." This is a confirmation that information openness can easily and directly have a trickle down value with regard to service delivery.

Another study conducted in Uganda by Reinikka and Svensson (as cited in Hubbard 2007) concluded that information "is a powerful deterrent to the diversion of grant funds at a local level." The researchers discovered relationships between the school's distance to the nearest newspaper outlet and the head teacher's information about the grant program. They then used this distance from a newspaper to predict the change in grant entitlement, based on the head teacher's specific knowledge of grant entitlement and release date. They found that a "strong (reduced form) relationship exists between distance to the nearest newspaper outlet and reduction in grant fund diversion after the newspaper campaign began." The publication of monthly disbursements figures, firstly for the education capitation grant, and then for all grants, was introduced to place pressure on the districts to deliver the services for which they had received funds. This was mandated in the Local Governments Act of 1997.

Hubbard (2007) reports that, "The Uganda case confirms that information does matter in reducing corruption, but the context suggests that it was about much more than the simple disclosure of

information. Uganda's 'information disclosure' began with the government, not citizens, following the results of the first World Bank survey. This 'information' likely strengthened the resolve within the Government of Uganda for reform and also hardened the resolve of the donor community to reduce leakages. The information campaigns aimed at Uganda's citizens later became an element of this story, but was not the driving force".

Muwanga, the Auditor General, concurs: "Governance is about accountability, participation, and transparency. If the people have the information, they get empowered, they can participate, they can demand accountability, and this can bring about development."

It follows then that Uganda needs to open up more of its data because of the clear and vast benefits for accountability, innovation, and improved service delivery that would result. The World Bank's Edward Anderson makes the case for opening up:

"For greater transparency, participation and collaboration in public services Open Data policies serve as i) an enabler for greater citizen trust as well ii) reduced costs and efficiency of government since citizen and private sector can engage more easily on feedback, e-services and co-creation models. Ultimately, most government data is a public good paid for by citizen taxes and by embracing 21st century ICT standards and technologies, the government can achieve much greater engagement with citizens and reach of its services. Open data also has the promise to stimulate innovation and job creation amongst young technically minded youth in Uganda who can make apps for government service much cheaper than traditional international suppliers."

Edward Anderson, ICT Policy Specialist, World Bank Uganda.

3.3 Role of Government

Whereas all the four players in the OGD cycle concurred in supporting the government going open with its data, it was important to ascertain whether there was willingness at the political level to go open and whether the willingness could be translated into commitment. There was a general feeling that there is willingness to go open and this could be inferred from the different initiatives that are taking place. The need for accountability and transparency feature prominently in key government documents, such as the BTTB 2011/12, the NRM Manifesto, and the National Development Plan.

Wire and Grameen Foundation's Ali Ndiwalana concurred that there was willingness at the political level, but noted that this was not being translated into implementation. Government had put in place the requisite regulatory framework according to Saaka and Torach, what was lacking was the implementation. Sean Blaschke and Daniel Stern believed what was lacking were the structures to get the OGD going. The various on-going efforts, such as the collection of data by all ministries, in some instances its sharing, needed to be harnessed and brought under a single national lead initiative.

But a key to the success of government's efforts, which not many respondents mentioned, was the culture of secrecy among public servants, which hinders them from making public even the most innocent piece of information. One public officer who is working on promoting access to information in Uganda aptly summarised as follows:

"To move from a culture of secrecy and lack of accountability, to a culture of transparency and accountability is a challenge. In practice even when political leadership supports change, bureaucracy can hinder the smooth transition towards openness. It is therefore of crucial

importance that the citizens as well as officials be informed about this law and how the right of access to information can work to their benefit. This calls for vigorous sensitisation of the masses who are beneficiaries and also the implementers i.e. the public bodies. So far the sensitisation of masses in our country is still very low due to logistical constraints."

3.4 Open Government Data and Incidence of corruption

The proponents of Open Government Data believe there is a correlation between lack of open government data and the levels of corruption in a given country. Indeed, the majority of respondents believed that lack of data in the public domain creates a cover for the public servants to engage in corruption. This is because the public did not have a basis of reprimanding their leaders or asking them to account. A study conducted by Hubbard (2007) on information access demonstrated a correlation between increased access to information and access to funds disbursed by government. Sean Blaschke was unequivocal on this issue:

"Absolutely! Kenya opened up its data and improved in the corruption index ranking. By making data public the social structures take interest and participation is enhanced. It creates an audit trail and accountability; issues are addressed because there is evidence." **Sean Blaschke**

John Muwanga agreed that there is a correlation between access to data and corruption incidence: "Ninety per cent of the time people are not informed. If Ministries do not make information available there is no way citizens can demand for accountability of the services offered. It is also difficult to establish value for money for government investments." For his part, Gilbert Sendugwa of the African Freedom of Information Centre asserted that corruption indeed thrived in circumstances where there was no access to information.

Wire, Kyonzira and Celestine Katongole had an alternative view, as they did not believe there was a strong correlation between access to data/information and corruption incidence. Wire suggested that citizens were partly at fault for making no attempts to know or to access information already in the public domain.

The current efforts to fight corruption through improving accountability and transparency are among the signs that demonstrate the willingness and the following initiatives are exhibits:

Institutional Development

Several institutions have been established and empowered to support transparency and accountability to the public. The three arms of government are all expressing willingness to allow citizens to participate. The Inspectorate of Government, The Auditor General Office, Public Accounts Committee of Parliament (which is chaired by a member of the opposition), The Anti-Corruption Court, The Economic Crimes Investigations Unit under the Uganda Police Force, Uganda Bureau of Statistics and Public Procurement and Disposal Authority are among the institutions that have been established to enforce accountability and transparency. Muwanga and Wire asserted that the government scored very well with regard to putting in place the appropriate institutional structures, but much less on what had been achieved via these institutions and pieces of legislation.

Legislation

Uganda has enacted a number of laws to promote transparency and accountability. The Access to Information Act 2005, the different legislation establishing the different government institutions that are charged with enforcing the laws, and most recently The Whistleblowers Protection Act 2010 are some of the legislation that has been put in place. Whereas the foundation to the establishment of OGD is the legal and policy environment and this has largely been achieved, the challenge is the actual implementation of the enacted legislation. This dents the willingness of the political leadership to implement OGD. As Okolloh (cited in Hogge 2010) states, 'For a long time the focus was on getting the Freedom of Information Act passed. Let's do that first and then once that law has passed, and then we'll have the data...' Uganda should capitalise on its seven-year Access to Information Act, as well as pieces of legislation such as the National Records and Archives Act 2001, and the Copyright and Neighboring rights law 2006 to delve into a comprehensive OGP programme.

Besides the non-operationalisation of the legislation, awareness about the legislation is still lacking.

Quite telling was that even some of the otherwise well-informed respondents in this study had no knowledge of some vital legislation in place in Uganda. For instance, Daniel Stern, Reineir Battenberg, and Sean Blaschke confessed they were not aware of the Access to Information Act 2005. Wire stated that there is limited awareness about the different legislation and that this disempowers the citizens to demand for service delivery, accountability, and transparency based on the laws.

Arguably, having in place the laws in itself is not sufficient; there ought to be harmonious co-existence of the new law and existing laws and this seems to be a major challenge. For example, Mukooyo asserts that Access to Information Act 2005 is in conflict with some other enabling laws and what takes precedence is sometimes debatable. This argument is backed by Magara (2007). For example, the laws governing government officers with regard to making information accessible to the public goes contrary to the act. Article 9(1) of the Public Service Act, 1969 and Article 22 (12) of the Education Service Act, 2002, Act 6, No. 4, criminalise the disclosure of information by public servants (Uganda, 2002). The Public Service Act 1969 in particular specifies that: "It is an offence for any member or officer of the Commission [government department or organisation] and any other person to knowingly publish or disclose the contents of any document, communication or information whatsoever that has come to his notice in the course of his duties in relation to the Commission without the written permission of the Minister (Uganda, 1969, Chapter 277, Article 9). It is prudent to note that government officials abiding by these regulations deny a citizen access to information citing this law.

Grace Natabaalo of the Africa Centre for Media Excellence contends that whereas the regulations to implement The Access to Information Act 2005 were released, they still have limitations. For example, you need 21 days before your request for information is approved. This is at the minimum. Mukooyo shares the same sentiments, noting that data is spread in different offices and a citizen needs clearance from the Accounting Officer of the government department before they access the data.

Also, a number of respondents attributed the foregoing state of affairs to lack of political will. Political leadership is at the fore of ensuring that these laws are implementable. For example, the

Access to Information Act has been in existence since 2005 and to date it is still shrouded with controversy.

Government's Competence to Implement OGD

As already stated, government has put in place the ICT infrastructure that should facilitate the deployment of OGD. But infrastructure without people is a challenge. The majority of respondents believed that government had in place the competence to implement OGD, but it was largely an issue of the right attitude. Saaka, the head of the national IT authority, was positive about the competence: "The basic infrastructure is in place like the National Backbone Infrastructure and the National Data Centre. What we need is the implementing framework like having a government web-portal. Government needs also to work on issues of accessibility - the cost of accessing internet." However, all the government technocrats who participated in this study contended that there existed the required competence to enable the deployment of OGD. A number of respondents who were not government employed contended that there existed the required competence in some departments, although it had not been fully utilised to enable the realisation of OGD implementation.

In terms of technical training, Uganda has one the fastest growing education sectors right from primary to the higher education levels. The Uganda government introduced the teaching and examination of computer skills at secondary school level; implying that by the time many students join university they have basic IT skills. At university level, over 33 universities are offering ICT related courses and more than 1,000 students graduate every year. ICT related courses are offered as independent degree or certificate programmes. All university courses are required by the National Council for Higher Education to have an ICT course to equip the students with ICT skills. Makerere University has the highest number of computing programs and graduates an average of 750 students per year.

Anderson is confident and advises that there are excellent software programmers and developers in Uganda. But also open data builds on the work of previous efforts. USA and UK make their open data tools and experience available, also Kenya, Tanzania have started work on this and many technologies can be shared and improved upon. Uganda does not need to start at the beginning; instead Uganda can take the best practices from Kenya, UK and others for purposes of learning and replication. "This is a way to jump ahead of the crowd very cheaply and quickly," said Anderson.

The fact that all government agencies have websites is an indication of the available competence to support OGD in Uganda. Most of the websites have some data that can be accessed although majority of it is not in a re-usable state, with exception of the Ministry of Finance Planning and Economic Development (www.finance.go.ug) that has data in open format – although a great deal of its data is also not in open format.³⁶

Government websites are sometimes even touted as drivers to e-Democracy because they help boost democratic practices such as access and disseminating public information and in some instances voting, deliberation or decision-making. Government websites should be largely Open Government data dissemination tools that enable and facilitate access to information and data.

³⁶ Open Data formats are formats that are machine readable and allow computer applications to extract data from them. Excel format is an example of an open format because one can manipulate it. PDF formats are not open and as such not machine readable although they are the most used formats to disseminate data over the web.

The practice of having information and data on the websites provides an opportunity for communities to interact with government as well as government to seek input from the communities (Riley 2003). Whereas this might not be the case for the great majority of Ugandan websites, the general standard of website usability is improving.

Stern and Battenberg believe that state of the websites is partly due to lack of technical skills but also generally the lack of intuitiveness. Even with government website guidelines³⁷ in place, not many ministry websites are conforming to the standards set. Majority of the respondents were of the opinion that having functional interactive websites is essential in ensuring that government - citizen communication is two way. Interactive websites should enable bottom-up approach that enables the citizens to direct and influence the reforms they want to see undertaken (Traunmüller, 2003). Sam Muhanguzi suggested that functionality should preside over form, and that is why most government websites pay more attention to form like having animated slides and less on engaging with the stakeholders. This made these websites less functional and more formal - having a website for the sake of having one.

3.5 ICT as an enabler of OGD

ICT is presenting opportunities to enable OGD than ever before. Technologies are converging and mobile devices are becoming prime access devices. These possibilities are enabling innovations to emerge, because people are willing to try out. Access to data presents an opportunity to see new possibilities. ICTs enable the dissemination of data but at the same time the manipulation of this data. Uganda with 15 million mobile subscribers and about five million internet users has a population with significant means to access data. All the respondents concurred that ICTs have a great role to play in enabling OGD if the other enabling factors (requisite legal environment, ICT Infrastructure, Human resources, among others) are in place.

With regard to role of ICT in OGD, Natabaalo stated:

"As communities in Uganda increasingly adopt and use new ICT devices, technologies and related services, they generate massive amounts of ambient data. Some data we create and choose to share publicly through digital news media, blogs, forums, and social networking sites. With Open Data, government can use these "data exhaust" – that is, the digital trails we leave behind in data - merely as a by-product of living our daily lives, using digital services to buy and sell goods, or search of information. What makes this data so powerful is that it can provide a picture of population well-being in real-time, moreover making the data already being generated automatically, as a by-product of populations' everyday interactions with one another through technology." **Grace Natabaalo, Programme Associate, ACME**

It is evident that ICT plays a pivotal role in the development of OGD as stated by Sam Muhanguzi: "ICT enables OGD by hosting and publishing content and exposing standards for data exchange that encourage free use or embedding information in other packages for example radio, web, SMS etc". Kyonzira brings closer home to her workplace: "In the current age and era, ICT is the way to go, and that is why even the Ministry of Health has adopted the electronic platform for collecting and managing health data through the District Health Information Software (DHIS2).³⁸ There are benefits in using ICT which range from improved timeliness of reporting, improved data quality through having less manual interactions with the captured data, increased quality through the

³⁷Web standard guidelines www.ict.go.ug/index.php?option=com_docman&task=cat_view&gid=38&Itemid=61

³⁸ DHIS; health.go.ug/mohweb/projects-2/dhis2

business intelligence inbuilt in the systems, among others.” The foregoing demonstrates what capabilities are possible if the technologies are appropriately utilised to return maximum benefit.

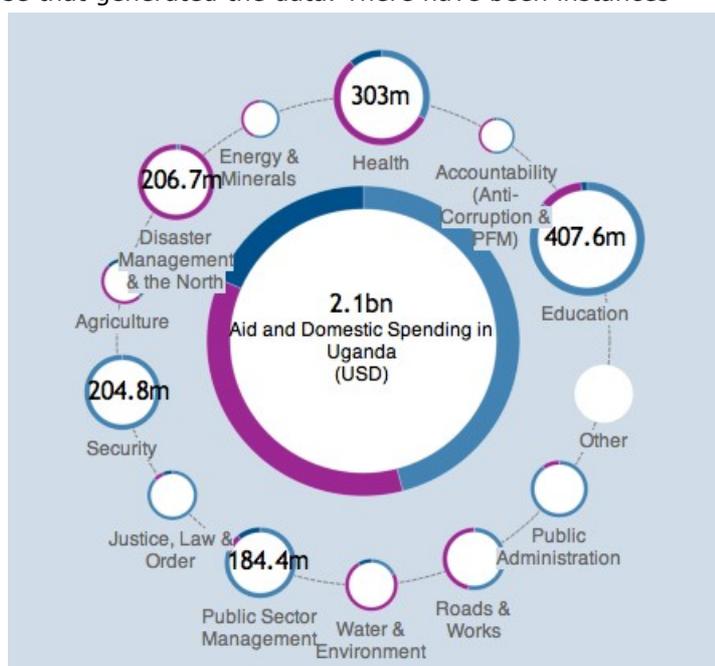
3.6 Capacity to re-use the OGD

The real value of OGD is realised when there is local capacity to re-use the data. Uganda and particularly Makerere in 2011 hosted two Hackathon events³⁹. One commonly cited challenge was poor access to open data. All the Apps that were developed during these events used dummy data which in most cases does not help one to appreciate the value of the application.

Blaschke, Wire, Katongole and Battenberg are convinced that Uganda has the capacity to re-use the OGD but the reusable data is hardly available. The challenge is that when data is available it is not in a format that enables re-use. Many times this data is shared in closed formats like PDF and this does not enable re-use.

The cornerstone of Open Government Data Initiatives is to enable government data to be accessible, usable and re-usable. This requires structures in place that will ensure that data is in a format that is in an acceptable form for the three attributes. Having data that is accessible, usable and can be re-used allows third-party entities that generate useful information/ services/ products that were not originally intended by those that generated the data. There have been instances where government officials have witnessed tremendous value out of the data they possess.

For instance, www.opendatauganda.com⁴⁰ is live with open data sets and is just a few days old (as of April 2012), according to Celestine Katongole the person behind the initiative. Whereas this site presents raw data, it presents an opportunity for people who deal with data to creatively develop applications, according to John Quinn, a researcher with Makerere University. “We developed an app for crime management three years ago,



and to date it has been very difficult to access real time data,” said Quinn. “Access to data and being able to manipulate it creates different scenarios that might not have been thought about originally,” added Daniel Stern, who noted that Uganda had the talent to develop some of the coolest apps, the case in point being the “MafutaGo App⁴¹ which won the First Runner Up prize at the 2012 Mobile World Congress in Barcelona.

³⁹ Hackathons are events where software developers come together to develop application for the good of the community. These are organized under the auspices of Random Hack of Kindness www.rhok.org

⁴⁰ www.opendatauganda.com went live on Friday 23rd March 2012

⁴¹ Mafutago is an open-source application that maps fuel stations in Uganda and helps motorists to find the nearest petrol station with the cheapest fuel on a given route. This was developed out of a Hackathon event. www.mafutago.com

Example of re-use: Visualising Uganda's aid and budget data

An exercise conducted in 2007 by the Overseas Development Institute to provide the Government and development partners with a more accurate picture of development assistance to Uganda found that "there was actually double the amount of project aid in Uganda compared with what the government knew about," despite routinely requesting this information from donors, noted Publish What You Pay's Mark Brough. His organisation together with the Open Knowledge Foundation has developed a visualisation of all aid and budget data for Uganda mapped onto Uganda's budget for 2003-2007. It can be viewed at: www.publishwhatyoufund.org/uganda/uganda-with-data.htm. This initiative shows spending across different sectors, or allocations to a particular sector over a period of time. As noted by one observer, "Even in countries where national budgets are relatively easy to access and analyse, aid spends are all too often the crucial, missing pieces of the puzzle, creating huge headaches for governments and civil society groups eager to make sure precious resources are wisely spent."⁴²

While Brough would like to update the visualisation to map International Aid Transparency Initiative (IATI) aid data (iatiregistry.org) onto Uganda's budget, at the moment it is only available in PDF format. "It would be really interesting to map spending (through the framework sector PDFs) through to outputs," noted Brough, who added: "It's great that such a large amount of information is now available, but it's a shame that it's in an unhelpful format. Releasing information in standard formats as machine-readable data vastly enhances the possibilities for re-use and analysis."

Publish What You Fund says that in many countries, at the moment no one knows exactly how much aid money is being spent, where or on what; and that in most cases, not even governments receiving aid have a full picture of where all the money goes. With more information, citizens in both donor and recipient countries could know whether aid money is having the best possible impact. And if aid agencies published information on who is doing what and where, duplication could be minimised. With aid transparency, says one observer, "civil society will be better equipped to track down evidence of waste and corruption, and will be able to have more informed debates on how their governments are spending precious resources."⁴³

Access to open data eliminates duplication of effort, but at the same time creates a community of data collectors who are always updating the sets in their day-to-day work. In 2011, during mHealth Mobile Monday Kampala, more than 10 applications were presented and they were all collecting data using mobile devices.⁴⁴ At the same event, it was reported that there were more than 25 mHealth applications in Uganda although the Ministry of Health had no idea what data was being collected and in what formats. If this data was converging into one location, what value would it create, but most importantly, what would be the spin off value?

Robinson et al (2009), comments that the biggest advantage of third party data processing is to encourage the emergence of more advanced features, beyond the delivery of data. He says exactly which of these features to use in which case and how to combine advanced features with data presentation is an open question. "Private parties might not get it right the first time, but we believe they will explore more approaches and will recover more rapidly than government will from the inevitable missteps," Robinson and colleagues stated. "For those desiring to build interactive sites, the barriers to entry are remarkably low once government data is conveniently available.'

⁴² Claire Provost, Solving Uganda's budget puzzle, *The Guardian*, November 25, 2011

⁴³ Ibid

⁴⁴ www.momokla.org event (held on the 29th August 2011) that was hosted by UNICEF,

Anderson summed it up by noting that: "Open data is full of unexpected and positive spin-offs. The government should embrace it wholeheartedly but with an open and flexible mind, welcoming a wide array of Uganda's players to use it as they wish. This requires patience, willingness to experiment and take some risks, and lots of discussions with unusual partners in the innovation community."

3.7 Challenges of Accessing & Opening Government Data

There are a number of challenges associated or envisaged in the implementation of open government data initiatives in Uganda. These challenges span across the spectrum and would require a multi-faceted approach in dealing with them. As already alluded to, government data is not harmonised as every unit has its own set of data and it is difficult from the user perspective to know which piece of data is valid or should be trusted. As John Muwanga states, "for data to be of any value, it has to be centralised and this should be authoritative; information which is wrong is more dangerous than no information. There is need to have a centralised data source, [it] should be validated, old data is bad data... this leads to bad decisions, mal-administration is the result."

Critical to access is to know the source of what you are searching, and in many instances where to start searching is a challenge. Having in place a central location would greatly enhance access. NITA-U in 2011 commissioned the National Data Centre (NDC) but it is not yet operational. Operationalising the NDC without the basic requirements like standards and formats could lead to no substantial value being attained. Battenberg comments that lack of procedures and standards in dealing with government data compromises the quality of the data and eventually the output. Government has a lot of data sets available but these lack basic components like licence on how to access and share the data. Blaschke, on the other hand, asserts that there are no tools available to make data open; for example many of the Ministries in Uganda lack validation structures and guidelines on how to make data open.

Besides the technical issues regarding government data, respondents suggested that many times the challenges are brought about by the belief that making data public dis-empowers the public officials. Muhanguzi calls it "imaginary fear"; and Wire contends that it is not in the interest of the current government employees to go OGD because "We have a lot of skeletons that will be exposed, it will be a Pandora's box, litigations are likely to come up, people are likely to lose their jobs, and government officials are not interested in efficiency". But there are issues with citizens too. Muwanga observed that the Ugandan public demonstrated "limited interest in demanding for data" and many were naive about what they ought to ask for. And as such, Natabaalo contended that because citizens were not asking for this data, public officers often thought the public was not entitled to public data held by public offices.

However, according to Blaschke, the accessibility to public data varies, depending upon the ministry and with whom one is dealing. For data that has already been approved, it is not complicated if one knows where to look. Sometimes it takes years to get the approval because there is no structure with regard to getting data approved. Getting approval for the release is crucial, and it will be important that a mandated line ministry and department are in charge of soliciting from governments the various data sets that will then be made public.

Learning from the Kenya Open Data initiative

On July 7, 2011, President Mwai Kibaki launched the Open Data (www.opendata.go.ke) initiative, probably the first in Sub-Saharan Africa. The initiative had been championed by an enthusiastic Permanent Secretary in the Ministry of ICT, who convinced other government departments, notably the finance ministry, about the need to avail data and how harmless this would be. Ultimately, the Kenya ICT Board took charge of the Open Data initiative, and worked with the World Bank, Google, Ushahidi, local universities and selected government departments to launch www.opendata.go.ke. A great deal of the data came from the World Bank, and consisted of existing published data sets.

The data is available on-line in a flexible, user-friendly platform that allows users to view data and compare different data sets, create maps and other visualisations. Users can also directly download underlying data for their own uses. At launch, there were just over 200 datasets; by November 2011, the number had risen to more than 340 datasets.

The Kenya Open Data initiative aims to make government data:

- 1) Technically open and accessible: the data should be available for free; easy to find (online, in one place and searchable) and in a convenient digital format that's easy to use and modify (e.g. an XML or spreadsheet file and not a PDF document or image file)
- 2) Legally open, reusable and redistributable: the license under which the data are released should allow anybody to use some, all or new combinations of data as they like (e.g. perform analyses or build applications) and then distribute these new works either commercially or for free.

Datasets available

- Fiscal data 2002-2010
- Local authorities, ministries expenditure and spending 2002-2010
- Community Development Fund (geo-mapped)
- National Census 2009
- Secondary Schools Facilities (geo-mapped)
- Health Facilities (geo-mapped)
- Poverty rates by county 2005/6

Ahead of the launch of OGD, the World Bank team suggested that the group working to launch should begin by completing the curation of the public expenditure datasets and the 2009 census tables, also compiling publicly available government datasets already held internally within the World Bank which could be released through the data catalogue. According to Hanif Rahemtulla H. et al (2011), in vetting the data, the group adhered to two principles: (1) focus on the most relevant information for grassroots citizens and (2) prioritise information that had previously been published in hard copy so that it would be shareable through the online portal without need for additional permission. The World Bank team worked with Kenya's National Bureau of Statistics to create county estimates from district files, by developing estimates from several large datasets including the Census and Kenyan Integrated Household Budget Survey to ensure such datasets remained meaningful and relevant to citizens. The team also sought to include datasets in both English and Kiswahili to elicit a better response from the average Kenyan citizen.

Linet Kwamboka, Open Data Lead, Kenya ICT Board⁴⁵

Role of media, donors, civil society: *These provide the demand side of the initiative. They create the right momentum that allows people to have an idea of what exists and the donor community becomes very unique as they actually fund the developers to create interfacing applications.*

How to get Government to see benefits of opening up data: *Positive stories. Show examples of who has opened up and what impact this has had. The World Bank specifically has a positive story with their opening up and their fears and how this has actually benefitted them instead. Kenya is of course another example but there is a lot of digging deep that needs to be done to connect the dots and give the bigger picture.*

Demand for open data in Kenya: *There is high demand for Open Data both locally and internationally. Kenya being the first country in Africa to move forward with Open Data, we have become an example to the rest of the world as champions in that front. Demand side for Open Data is growing very steadily and spreading in various parts of the country.*

On re-use in Kenya: *Some people have made their own sites for regions and used the data. We are encouraging the developer community to create applications that interface the information from the site in a way that is more accessible to people. We have provided incentives for this including cash prizes and incubation opportunities for the developers that is going to be seen through the open data incubator coming up. More examples include research bodies e.g. iHub Research, bloggers, media, and civil societies.*

3.8 Recommendations

This study has raised a number of issues related to the rollout of an OGD programme. There was consensus on a number of issues at the three levels - top political leaders, the middle level and the other players (civil society, donors, academia, and private sector among others). A number of recommendations were made as outlined below:

1. Commitment to the cause of OGD: Uganda should make a commitment to open its data to the public in the near future.
2. Sensitisation of the public: If OGD is to succeed, there must be substantial investment in making the public and public officers aware about OGD and its benefits. Thus, Government and civil society actors should undertake civic education, awareness raising, and capacity-building on open government and the role citizens and citizen groups play.
3. Learn and emulate from proximity: Majority of the respondents recommended that Uganda should seriously take a leaf from Kenya because of the substantial progress so far made through the Kenya Open Data Initiative.
4. Political leadership should take full responsibility: It was noted that in areas where there were gaps, political leadership was largely responsible. The political leadership of Uganda should take full responsibility in implementing supporting legislation and policies.
5. Encourage and enable community engagement: Government should open up and allow it to be part of the on-going engagements on different fora. Wider stakeholder engagements in the wake of OGD should be undertaken to realise its full potential.
6. Attitude change: Attitude of the public officers was found to be wanting with regard to OGD. Developing appropriate programmes that enable the public officers' to change their attitudes will have a significant impact on the success of the OGD initiative in Uganda.

⁴⁵ Interview with CIPESA researchers, April 4, 2012

7. Start Small: A number of respondents recommended that government could consider starting on a pilot phase with specifically the primary sectors of the economy. By having in place a government portal that collects and processes information would be a step in the right direction. The domain name www.opendata.go.ug would be good to have active at the earliest. NITA-U should technically champion and host the portal but ensure integration and shared data input from different sectors of government. This portal should be developed through a collaborative approach to inculcate ownership and sustainability.
8. There is need to empower independent oversight bodies to demand and to publish information on budgets, procurement and expenditures. Moreover, the Inspector General of Government should make public the wealth and income declarations of public officers which they declare under the Leadership Code Act
9. Initiate programmes to digitise public domain information and make it available through websites, public library systems and other appropriate dissemination media.

4. Conclusions

Some Ugandan institutions are performing very well as far as making public their data and information is concerned. The Ministry of Finance, the bureau of statistics, the Ministry of Health, are among these. However, there is need to transcend from the micro, that is the smaller units, to a national level. This requires having in place structures, systems, infrastructure and the right mindset to converge all government data into a single location. Moreover, this should be supported by appropriate regulations and standards that are in conformity with OGD initiatives.

In order to make a systematic conclusion, the three tiers will be used as a basis of assessment and conclusion.

1. Willingness at the top level to go OGD: Substantial progress (in terms of legislation, oversight institutions and the required ICT infrastructure) has been made in this regard that by inference one could conclude that there is willingness at the top level - the political leadership. However there is need to translate this willingness to commitment. Having in place the right legislation, infrastructure, institutions and the competent human resource without commitment to the cause of OGD is self defeating. On the whole it is evident that the willingness as highlighted in the different government literature hinges on the desire and drive for accountability and transparency as well as enhancing access to government information. Various data and literature has been presented supported by responses from key informants across the three tiers. On the whole it is prudent to say that there is willingness although it may not yet be substantial enough to warrant commitment.
2. Willingness/readiness at the middle level of government: Generally at this level the majority of the respondents in this category confirmed that there was substantial competence to enable and support deployment of OGD. Much as there exists the required competence, it was noted with concern that a majority of public servants did not have the right attitudes that would promote OGD initiatives successfully. There was need to create appropriate standards and formats for data capture, processing and dissemination. Government should hasten the implementation of the interoperability framework along with other frameworks that are yet to be implemented. Investing in having in place shared resources would greatly reduce the duplication of efforts currently taking place in the

various government units. It is equally prudent to state that at the middle level layer, Uganda has what it takes to successfully implement OGD.

3. Capacity for re-use: It has been ably demonstrated that there is substantial capacity to re-use OGD and substantial demand exists from a variety of data users. Initiatives such as www.opendatauganda.com are an illustration of both the demand and capacity to re-use OGD. A number of respondents alluded to values that would accrue from OGD, that the users of OGD are also generators of data which later enhances the real-time attribute of data. This calls on government to consider Public Private Partnerships as a catalyst for OGD deployment and uptake.

From the foregoing, and the entire study, we can conclude that there is substantial data that has been supported by key informants who participated in this study to conclude that Uganda is ready to implement OGD. With appropriate support and guidance Uganda should be in a position to start within the existing environment.

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