



Draft

Open Data Kenya

Case Study of the Underlying Drivers, Principal Objectives and Evolution of one of the first Open Data Initiatives in Africa.

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Abridged Version

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Abstract

In July 2011, the Kenyan government released 160 datasets via a publicly accessible online portal, launching one of the first Open Data initiatives in Africa. The initiative is expected to support greater public transparency and accountability, fundamentally changing the nature of citizen-government interaction. The release of public data online creates a platform supporting development of applications by civil society and the private sector, enabling expanded public outreach and engagement leading to “a more responsive and citizen-focused government” (Madera, 2009).

The paper outlines underlying drivers, principal objectives and the evolution of the Kenya Open Data Initiative from inception to realisation. A comparative study of Kenya Open Data and related US and UK initiatives is included, highlighting implications for the applicability of a ‘default model’ in other countries. The paper presents preliminary insights into the platform access and usage patterns since the launch, as well as perceived present and future impact of this initiative in Kenya. Finally, it outlines the vision moving forward, describing principal barriers and supportive factors that must be addressed for the effective use of public sector information in Kenya. Adopting a mixed-mode research design, the study draws upon surveys, observational data and interviews with key actors.

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His research is principally focused in the area of Open and Linked Data and Geographic Information Systems (GIS) and GIScience focusing on data visualization, data manipulation, and spatial analysis. Dr. Rahemtulla has also advised on the Kenya and Moldova Open Data Strategy and has been at the vanguard of several Open Data initiatives including the United Kingdom Open Data Master Class series supported by data.gov.uk through the Cabinet Office, Ordnance Survey and Esri UK, the software leader for geographical information systems. Dr. Rahemtulla has contributed widely to the international research literature in these areas funded by several research grants, including knowledge transfer and exchange funding.

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Introduction

In July 2011, Kenya became one of the first African countries to launch an Open Data portal, releasing over 160 datasets on budget and expenditure data, as well as information on health care and school facilities. The initiative intends to facilitate greater public sector transparency and accountability, fundamentally changing the nature of citizen-government interaction. Kenya Open Data has also generated excitement within a developer community leveraging information, vision and digital technology to create innovative applications that translate public data into a range of new services and goods for society. However, releasing Kenya's data represents only the first step to achieving its full social and commercial value. Access barriers limiting effective use of open data must be addressed and essential supportive factors cultivated for the "democratizing potential" of Kenya's data to be realized (Rahemtulla, 2010).

This paper charts the evolution of the Kenya Open Data Initiative from inception to realisation and envisions its future. Sections 1 and 2 document underlying drivers, principal objectives and the journey of Kenya Open Data. Section 3 analyzes Kenya Open Data versus related US and UK initiatives, assessing the wider applicability of this 'default model' of public sector information release to developing countries. Section 4 and 5 describe the Kenya Open Data portal, providing insight into the platform's access and usage patterns since the launch and its perceived impact. Section 6 outlines principal barriers and supportive factors required for the effective use of public sector information in Kenya. Finally, Section 7 outlines recommendations for moving forward.

1. Drivers of Kenya Open Data

Despite being the fourth largest economy in Sub-Saharan Africa, Kenya has fared less well than Newly Industrializing Countries at a similar level of development thirty-five years ago (Hon. Amos Kimunya, Minister of Finance, 2006). In 2008, the government articulated Kenya's Vision 2030 as a national strategy to improve living standards and revitalized growth through three pillars of economic, social and political development (Kenya Vision 2030, 2010). Information and Communication Technologies (ICT) is viewed as an integral part of Vision 2030, bolstering economic growth through providing access to new markets and alleviating poverty by contributing to better governance. Kenya's ICT sector has been the main driver of Kenya's economic growth over the last decade, outperforming all other sectors and attracting global attention and investment. Permanent Secretary Dr. Bitange Ndemo (PS Ndemo) of the Ministry of Information and Communications championed the release of government data as part of this broader ICT vision, viewing it as fundamental to "fuelling employment and wealth creation" (PS Ndemo, 2011). The new constitution provided further impetus through its emphasis on guaranteeing citizen access to public sector information.

2. The Journey of Open Data Kenya

2.1. A High-Level Champion Mobilized Support for a Beta Catalogue

PS Ndemo began requesting ministry data in 2009, launching a beta online data catalogue, *opendata.go.ke*, in June 2010 (Kenya ICT Board, 2010). Negotiations with ministries were ongoing and the release of further datasets an elusive task, provoking frustrations of both PS Ndemo and Kenya's tech community. PS Ndemo pledged at an ICT developer event in March 2011 that more government datasets would soon be available, making the promise, "I will come back...when we have gotten the data" (Ndemo, 2011). To realize this vision, PS Ndemo forged partnerships with the World Bank, Google and Ushahidi, garnering support for the initiative within government and the international community.

2.2. A Targeted Pilot Project Provided a "Demonstration Effect"

Seeking an "entry point" to reignite the conversation, the World Bank worked with the Kenya Country team to develop a sector pilot demonstrating the power of using openly accessible public expenditure data, combined with school performance related data and inter-active mapping to improve the delivery

of social services to citizens at the local level. The pilot visualized the location of 12,000 schools on an inter-active map, developing a system enabling users to overlay this information with socio-economic indicators and locations of World Bank-funded projects in the education sector. Aleem Walji attributes the successful engagement with the Ministry of Education (MoE) to “the power of visualizing data on a map”, which convinced the MoE of the merits of making school datasets publicly available (World Bank in Washington, Aleem Walji, 2011).

2.3. Calculated Political Manuevering Reduced Stumbling Blocks to Action

The breakthrough signifying a political environment conducive to realizing Kenya Open Data came in June 2011, when the Ministry of Planning provided its Census data. Confident that there was now sufficient support and data to launch an Open Data catalogue, PS Ndembo made the political calculation that it was better to obtain permission directly from President Kibaki, whose executive authority would override concerns at lower levels, rather than seek approval via legislative frameworks that could be a stumbling block.

2.4. A Dedicated Guidance Team Took the Initiative from Vision to Reality

With the official launch set in motion, PS Ndembo transferred responsibility for the delivery of the Open Data initiative to Paul Kukubo of the Kenya ICT Board, a government agency under the Ministry of Information and Communication mandated to coordinate ICT projects in development. Kukubo recognized the importance of mobilizing a team to realize Kenya Open Data, formulating a diverse taskforce equitably comprised of actors from government, private sector and academia (Kenya ICT Board, Paul Kukubo, 2011).

A technical sub-team developed an online platform (opendata.go.ke) hosted for the publication, visualisation and customization of open datasets. The team focused on three tasks: the platform architecture, the user experience and development of applications demonstrating the use of Open Data. Socrata, a commercial vendor in the US, was selected as the best short-term option as an “out of the box platform”, cost effective and rapid to deploy. Four applications were developed to generate visualisations based on available datasets. An Open Data API was created, enabling users to compare datasets, create visualizations and manipulate data. The UK Open Government License (OGL) was adopted to govern public use and reuse of the data (UK OGL, 2011, p.01).

A data sub-team collected and processed data from government ministries and other development partners for easy availability and understanding by citizens. The data team compiled government datasets held internally within the World Bank that could be released through the data catalogue. In vetting the data, the group adhered to two principles: (1) focus on the most relevant information for grassroots citizens (Kenya ICT Board, 2011) and (2) prioritize information that had previously been published in hard copy so that it would be shareable through the online portal without need for additional permission (PS Ndembo, 2011). The resulting data came from a variety of sources and topics, such as household surveys, public expenditures, school and health facilities.

2.5. Launching Kenya Open Data – A Success and Near Miss

Inaugurating Kenya Open Data on July 8th, 2011, President Kibaki called “upon Kenyans to make use of this ...portal to enhance accountability and improve governance in our country” (President Kibaki, 2011). An estimated 3000 people attended the launch event in Nairobi (CIOEastAfrica, 2011), eighty-five percent of which were from Kenyan ICT businesses and academic institutions. The launch garnered international acclaim from civil society, private sector and government representatives. However, the launch almost did not happen due to last minute concerns regarding: the decision to use a US based company as platform provider and the perception that Kenya Open Data was a threat to national security similar to WikiLeaks, the whistle-blowing website. Within forty-eight hours of the official launch, PS Ndembo was summoned before President Kibaki and several high-ranking ministers. During the meeting, PS Ndembo persuasively communicated that releasing Kenya’s data was imperative for economic prosperity. While the President and ministers ultimately aligned behind the initiative, these stories

exemplify that a champion is necessary but insufficient without broad-based support secured through communicating a clear vision.

3. Open Data Initiatives in Developing Countries

Initially led by pioneering initiatives *data.gov* and *data.gov.uk*, Open Data initiatives are rapidly proliferating worldwide. While the preponderance of open data catalogues launched to date are from OECD countries, the emergence of initiatives in countries such as Kenya demonstrates interest in its transformative potential, irrespective of income group or region (Gigler *et al.*, In Review). Such initiatives frequently cite the UK and US that have become the default model' for the release of public sector information that countries seek to emulate, regardless of their relative level of development (Gigler *et al.*, In Review).

3.1. One Conception of Open Data Actors: Three or Four Static Tiers?

In a Transparency and Accountability (TAI) commissioned Open Data Study, Becky Hogge derives a three-tier model of actors crucial to successful introduction of Open Data based on the US and UK experience. Motivated **civil society and "civic hackers"** are the first tier, providing a groundswell for change through traditional advocacy and innovative websites demonstrating how open information could be used. An engaged and well-resourced "**middle layer**" of skilled government **bureaucrats** make up a second tier of actors interested in Open Data to improve efficiency. **High-level political leaders**, motivated by either an outside force (in the case of the UK) or a refreshed political administration hungry for change (in the US), provided political will for change. This report asserts that **international aid donors** are uniquely influential in developing and middle-income countries, constituting a fourth tier of actors relevant to Open Data. These actors may indirectly influence developing countries by releasing their own data or directly by linking development assistance to progress on Open Data, creating a new form of governance conditionality.

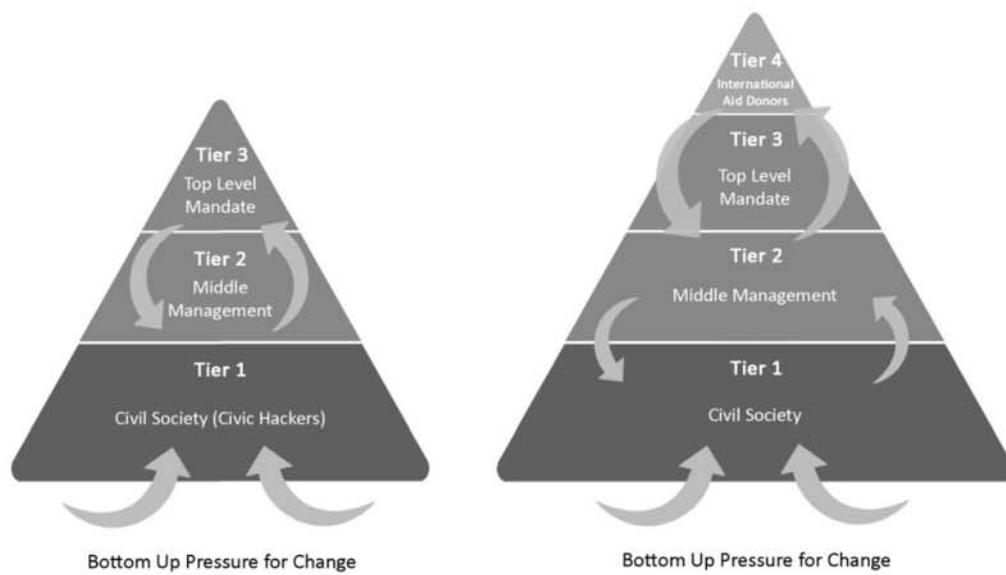


Figure 3.1. A visualization of TAI's model of Open Data in (a) Developed and (b) Developing countries. (Rahemtulla, 2011).

3.2. An Alternative Conception: Complex Interactions of Multiple Stakeholders with Diverse Motives

The model proposed by TAI (2010) belies an implicit assumption that actors representing the demand and supply side of public sector information remain constant for both developed and developing countries. On the demand-side, it assumes that individuals or third-party intermediaries have the will and capacity to use open government data to achieve social and commercial value. On the supply-side, the model assumes that governments can be convinced to mandate the release of public sector information and that they have the endogenous capacity to implement such an initiative.

This report proffers an alternative conceptual model of Open Data actors informed by the experience in Kenya and more general observations of initiatives in developing countries. This model reflects the complex interaction between actors across multiple tiers, driven by a distinct set of motivations by each actor group. Three actor groups were instrumental to the inception and realization of the Kenya Open Data Initiative. A **High-Level Change Agent** with the political will, leadership and vision such as PS Ndemo to champion Open Data within government. **Supporting Actors**, such as the World Bank, provided capacity building at an institutional level. **Civil society and the private sector** actors, such as Google and Ushahidi, served as demand-side drivers advocating for the release of public sector information.

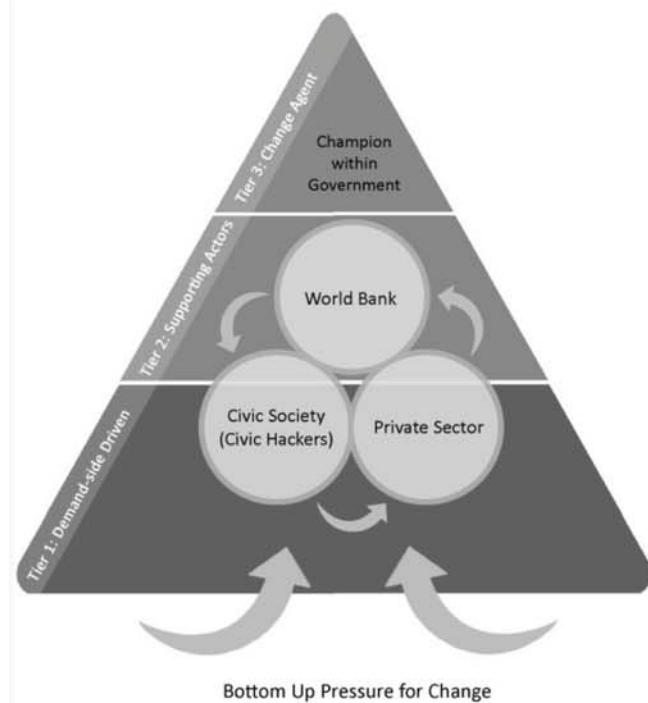


Figure 3.2. An Alternative Conceptual Model of Kenya Open Data (Rahemtulla, 2011)

3.2.1. Change Agent: A Champion within Government

As a high-level change agent, PS Ndemo provided political will necessary to overcome the inertia of entrenched bureaucratic silos and secrecy that inhibit the release of government data. PS Ndemo was motivated to champion Kenya Open Data by a confluence of factors. First, Open Data was consistent with PS Ndemo's long-term vision to move Kenya into the digital age in all spheres. Second, inspired by *data.gov*, PS Ndemo saw Open Data as facilitating greater transparency necessary to restore public trust in government lost during the 2007-2008 Kenyan Crisis. Third, Open Data represented a step towards Ndemo's efforts to enact a Freedom of Information (FOI) law (Ndemo, 2011). Fourth, PS Ndemo was motivated by a zeal for social entrepreneurship and the potential to develop models that other countries could replicate. In championing the Open Data initiative, PS Ndemo benefited from a close relationship with President Kibaki who was instrumental in helping him bypass normal bureaucratic procedures to fast-track the initiative (Ndemo, 2011).

3.2.2. Supporting Actors: Capacity Building within Government

The Kenya ICT Board, World Bank, civic hackers and the private sector can be characterised as 'enablers' of this initiative supporting capacity building at an institutional level. Specifically, the Kenya ICT Board provided administrative and managerial capacity. The World Bank became the primary 'supply-side' driver of government data based on their willingness and capacity to release datasets for public use, harnessing existing government relationships to obtaining access to data. Google, Ushahidi and iHub provided examples of productive third party use of government data, converting new mid-level Open Data champions within government. Finally, civic hackers and the private sector through Socrata provided the technical capacity in delivering the online platform.

3.2.3. Demand-Side Drivers: Civil Society and Private Sector Re-users of Open Data

Civic hackers and the private ICT sector were critical ‘demand-side’ drivers of Kenya Open Data Kenya. These groups advocated for the release of public sector information as a platform to produce new services or goods with social and commercial value. As Eric Hersman recalls, the local tech community was interested in accessing public datasets to facilitate “crowdsourcing” and develop applications that “helped people interact with public services around them” (Hersman, 2011)

4. The Kenya Open Data Portal Usage Patterns and Data Requests

Over a two-month period of June 1-August 1, 2011, the Kenya Open Data was viewed an average of 204 views per day. However, usage patterns reveal significant fluctuations. Initially high numbers of page visits in the 25 days preceding the launch (an average of 395 page views per day) significantly tapered off in the 25 days following the launch (an average of 122 page views per day). Subsequently, usage of the portal has declined even further to less than 120 page views per day at present (Figure 4.1)

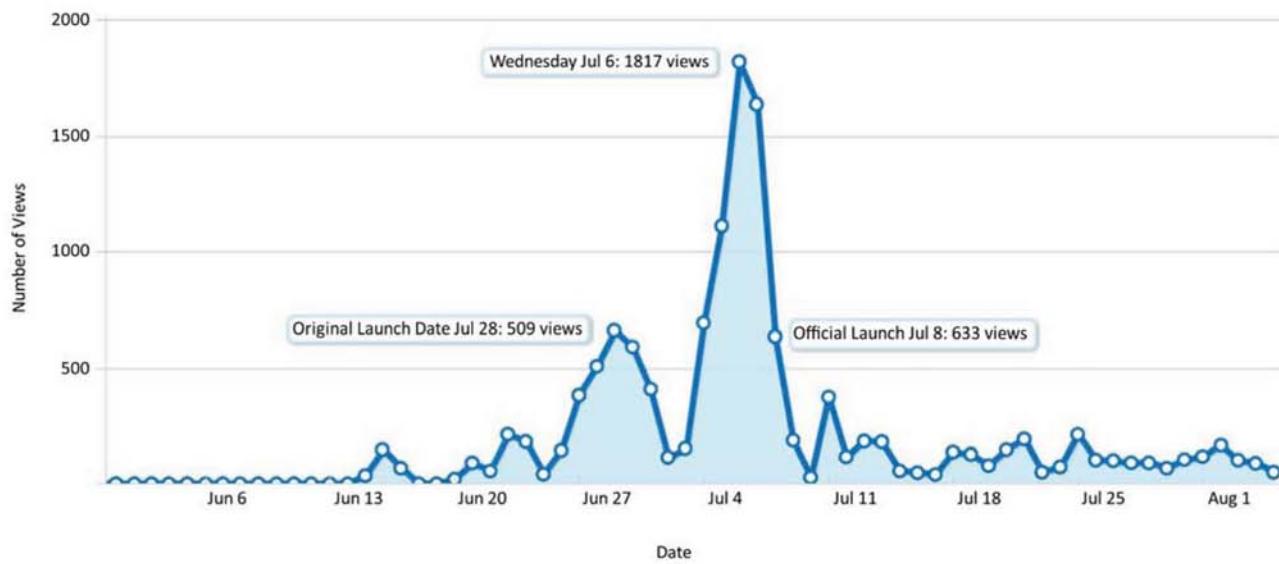


Figure 4.2. Usage patterns on the Kenya Open Data platform from June 1st 2011 to August 1st 2011

A similar pattern was visible in data requests. Seventy-four percent of requests for additional data were made in the five days following the launch with a sharp drop-off after this. Forty-three datasets were requested, predominately pertaining to economic, population and health data. However, only three of the forty-three requested datasets have been released. Analysis of user sessions indicates that the most frequently searched terms related to expenditure and population information and two-thirds of downloaded datasets were at the district or country level. These statistics indicate a strong geographic component to user information needs with a focus on more granular (or localized) datasets (Figure 4.2)

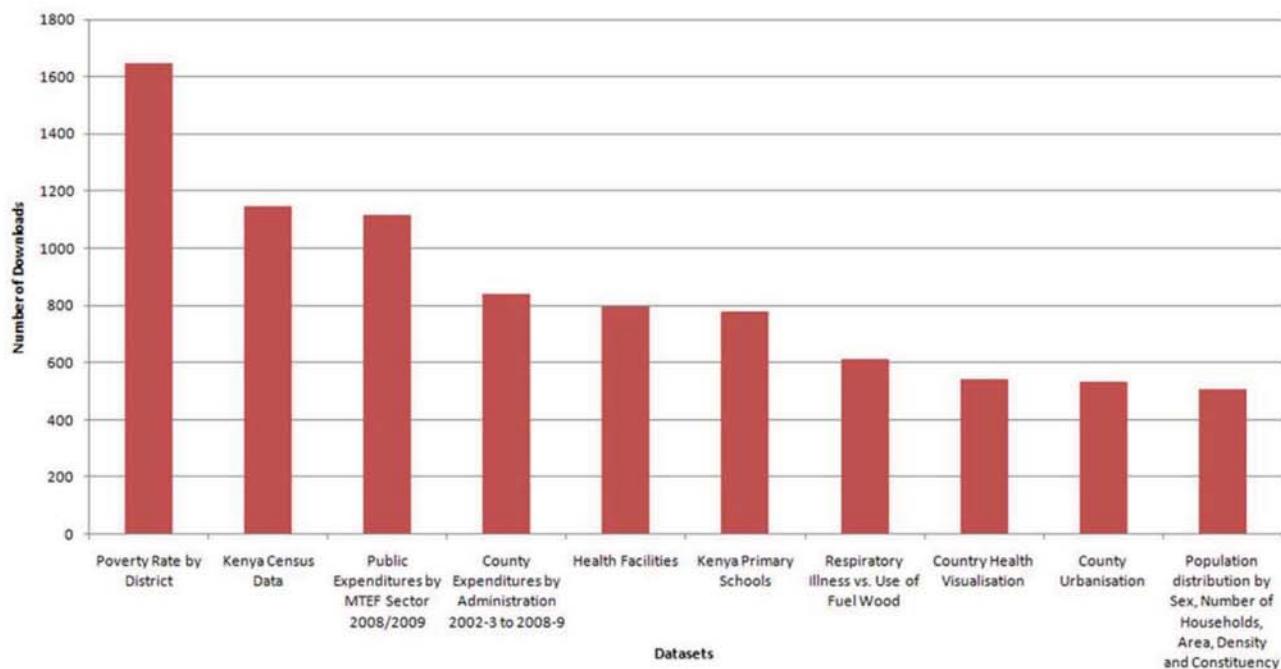


Figure 4.4. Datasets most frequently downloaded on the Kenya Open Data platform from June 1st 2011 to August 1st 2011

5. Communicating Kenya Open Data

While the Kenya Open Data Initiative has captured the attention of the international community, concerns have been expressed regarding its low resonance with the Kenyan media and citizens evidenced by low usage rates and limited media coverage (Ndemo, 2011). Limitations of the public media strategy surrounding the Open Data initiative likely hampered initial and sustained interest. Reporting embargos in the lead up to the launch militated against the need to help Kenyans understand “what [the portal] was and why it is useful.” (National Taxpayers Association, Michael Otieno Oloo, 2011) Public communications were exclusively conducted in English, excluding speakers of minority languages (Orao, 2009) and the government failed to use alternative media forms such a community television or radio stations broadcasting in local languages (Ochieng, 2011). Lack of a public media strategy subsequent to the launch has resulted in low levels of awareness of the portal’s existence.

6. Empowering Kenyan Citizens to Benefit from Open Data

Releasing public sector information represents only the first step to a more informed citizenry (Rahemtulla, 2011). Access barriers, such as digital inclusion and information literacy, that limit effective use of newly available data must be addressed. Essential supportive factors must also be developed including: an info-structural environment; a reliable and robust ICT infrastructure; a community that is ICT literate and supportive governance (Zainab *et al.*, 2002).

6.1. Infrastructure

An estimated 70% of Kenyans in rural areas and 60% in urban areas are without Internet access (Ochieng, 2011). Poor households have lower ICT use, and by extension are underrepresented among users of open government data, due to the high cost of Internet, limited electricity and reduced signal in remote areas (Francis Waithaka, Business Daily, 2011). The Kenya ICT board is working to improve physical information infrastructure (Kimutai, 2011), however, concerns remain regarding the impact of disproportionate focus on technical infrastructure. Beyond economics, relative social status influences ability to fully access and utilize technology. In Kenya, those with lower educational attainment indicative of rural areas (InterMedia, 2010) or circumscribed social roles such as women and girls (Huyer and Sikwka, 2003) are at risk of falling behind and not fully participating in the information age. ICT initiatives must go beyond provision of technical infrastructure to directly enhance female access to ICTs, improve literacy and incorporate mobile technology.

6.2. Data Literacy

The release of public sector information without a commensurate increase in data literacy will do little to empower the average citizen. In Kenya almost 40% of the adult population and 30% of youth are illiterate (Kenya National Adult Learning Survey, 2006), embodying an insurmountable task facing governments of developing countries with comparatively low human capital from constrained educational prospects (Gigler *et al.*, *In Review*). Even with the development of user friendly interfaces and applications to help citizens better visualize data in the Kenya Open Data portal, it is not certain that the public has sufficient knowledge and skills to interpret and use data responsibly. Paul Kukubo calls upon data intermediaries to act as facilitators with the skills and knowledge to place data into context for the wider public (Kukubo, 2011). However, reliance on third party intermediaries necessitates social accountability to ensure they create social and commercial value rather than ‘asymmetrically exploit’ freely accessible information at the expense of others (see Gigler *et al.*, *In Review*).

6.3. Info-Structural Environment

The Kenya Open Data portal allows users to compare different datasets, create visualizations and interact with the data. However, sheer volume and complexity of the data makes it largely inaccessible to the general public. The data must to be simplified and put into a meaningful and useful context that “ordinary Kenyans can understand” and thereby “meaningfully participate” (Oloo, 2011). A rebalancing of the data is also needed to enhance demand and improve citizen capacity to use information to their benefit, prioritizing “locally relevant”, granular and current datasets (Oloo, 2011). The portal does provide mechanisms to solicit user feedback and requests for additional datasets, however, since the launch few requests have been fulfilled and the overall number of requests has declined. Lingering confusion over the terms of reuse of information available via the portal must also be addressed to encourage further use (Publish What You Fund, July 2011).

6.4. Supportive Governance

Prior to the launch of Kenya Open Data, project timelines and high-level pressure to “go live” skewed discussions towards a short-term focus on the launch rather than substantive consideration of long-term sustainability of this program (Kenya ICT Board, Kaburo Kobia). A long-term mindset is essential both to the sustained impact of Kenya Open Data, but also the initiative’s attractiveness to other countries.

7. Open Data Kenya: First Steps and the Road Ahead

Kenya Open Data is a critical part of a national effort to create an enabling infrastructure accelerating human and economic development throughout Kenya. Kenya’s decision to join the “Open Government Partnership” (OGP) furthers the vision of Open Data, integrating Kenya within an international community providing invaluable external pressure (Ndemo, 2011). This paper posits recommendations to realize the Open Data vision focusing on four strategic areas: (a) an Open Data Roadmap; (b) open development; (c) performance management and (d) citizen engagement.

7.1. An Open Data Roadmap: Prioritized Open Data Action for the Next 3-5 Years

7.1.1. Reduce Confusion and Enhance Clarity on Open Data within the Open Government Directive

Limited clarity behind the open government data initiative to date breeds confusion and makes it difficult to engage the public in holding the government accountable for progress. It is recommended that an Open Government Directive set out clear parameters for Kenya Open Data including expectations of government actors and a recommended policy framework to mobilize broad-based support within government and society at large.

7.1.2. Institutionalize Open Data Efforts with Clarified Government Responsibilities and Budget

Institutionalizing Open Data throughout the government necessitates clarification of the institutional environment and arrangements for platform maintenance. It is recommended that KNBS is best positioned and should be responsible for ongoing data curation for both their datasets and those from other ministries. The Kenya government will need to make provisions to assist KNBS in managing this increased responsibility and allocate dedicated resources to sustain and scale the Open Data initiative in the long-term. This report recommends the development of a 3-5 year management and financial plan specifically for Kenya Open Data that clearly outlines resource and structure needs moving forward.

7.1.3. Consolidate Open Data Leadership with a Steering Committee and National CIO

This paper recommends establishing a Steering Committee to provide sustained strategic and tactical direction to the Kenya Open Data, bringing together representatives from the government, civil society and private sectors. It also recommends that a National Chief Information Officer (CIO) be appointed to provide leadership for the ongoing development of Kenya Open Data, advising and implementing priorities of the Steering Committee. Such an individual should be well-known and respected for their expertise and leadership in this space, critical to their success in navigating relationships across government with producers and publishers of data.

7.1.4. Establish An Open Data Unit & Technical Committee to Ensure Data Accessibility and Quality

It is recommended that an Open Data Unit responsible for the ongoing portal operations be created within the KNBS. This unit would be tasked with: ensuring data quality; managing new and existing datasets; maintaining a data asset inventory; supporting data owners to identify and curate data for release; troubleshooting the platform website and supporting end users through community engagement and responding to requests for data and assistance. A Technical Committee should be convened, consisting of members within and outside of government, to provide guidance on data standards, formats, converters and transfer criteria to improve data accessibility. The Technical Committee would support the Open Data Unit and report to the Steering Committee. Clarifying the terms of use and reuse of government data under the Kenya Open Data Licenses is a priority area to be addressed by the Technical and Steering Committees to remedy confusion among end users.

7.1.5. Provide Proactive Capacity Building for Open Data within Ministries

As the process of Open Data institutionalization unfolds, the functions of the Open Data unit will be embedded and mainstreamed throughout the government. This report recommends proactive capacity building programs in anticipation of the time when the departments that produce the data are effectively processing and releasing it without need for a specialized unit. Training programs should focus on practical issues for departments encompassing issues such as capturing, structuring and publishing government data. This should be offered alongside complementary programmes showcasing technology and tools available for to support dissemination of government data both internally and with the wider community.

7.2. Advance Open Development with Enhanced Data Availability and User Interface Functionality

This report recommends implementation of institutional mechanisms that facilitate publication of datasets held by various government ministries, agencies and organisations, enabling the government to fulfil its commitment to openness and transparency. First, an explicit link must be made between opendata.go.ke and currently ‘stove-piped’ information management systems across the government to enable seamless and regularly scheduled data collection and publication necessary to ensure the constant flow of new and relevant information to the portal. Second, opendata.go.ke must be able to interface with and make available data from existing government data repositories such as digital land records and

Economic Stimulus Programme Budgets. Third, a reliable data inventory of government data assets must be established to assist in monitoring progress on data release.

It is also recommended that opendata.go.ke emphasize more relevant, granular datasets and improved functionality allowing users to create context and meaning for datasets. Users should be able to create visualizations, analyze datasets and upload their own datasets supported by opendata.go.ke. The portal should provide a virtual space for users to connect to one another and government officials. Online training programs, information and resources should aid in data literacy for users to fully reap the benefits of open data.

7.3. Improve Performance Management with an Open Data Dashboard and Impact Assessment

This paper recommends the adaptation of dashboards tracking department performance in access to information for use in Kenya's Open Data initiative as a "powerful motivator" for departments to "improve compliance" in a "race to the top" (U.S. State Department FOIA, 2011). This report also advocates for the development of a preliminary impact evaluation framework for Kenya Open Data, formulated through a process of engagement with diverse initiative stakeholders. This framework should guide independent reporting of publicly available outcomes. A starting point for such a framework should be addressing four fundamental questions raised by Dani Kaufmann at OGP, adapted for Open Data. First, who is doing the work of measuring progress of Kenya Open Data and what approaches are they using? Second, how do Kenya's definition of "open data" and its desired outcomes vary, and what are the corresponding implications for impact and assessment efforts? Third, what examples do we have of government working with external partners to assess the impact of open data? Fourth, what are the ingredients to a successful impact evaluation scheme for Kenya Open Data?

7.4. Engage Citizens to Match Supply with Demand for Open Data

The government must proactively connect its supply of public sector information with nascent individual and third party demand. The report recommends that the government identify mechanisms for citizen feedback as outlets that demonstrate benefits of use and reuse of government data. The government can also catalyze innovation through championing competitions or facilitating co-creation of new public goods or services. (Khokhar, 2011) This report recommends refocusing the Tandaa Digital Content Grant to better target awards to applications that address the most pressing needs of individuals and Kenyan society at large.

The Kenyan Government should appoint an Open Data Communications Officer to spearhead promotion of Kenya Open Data, mobilizing support and understanding of the initiative within government and among key stakeholders such as journalists, developers and civil society. This report also recommends that the government launch a high profile media campaign to raise awareness of Kenya Open Data initiative through multiple communication mediums, including: print, television, radio, billboards and social media. To reduce the possibility of language barriers, the media campaign should include broadcasting in local languages.

7.5. International Outreach

This paper calls upon the Kenyan government to document and share its experiences with Open Data as part of its contribution to advancing Open Government in other countries. Given Kenya's regional influence, particularly working to provide guidance and support to countries such as Nigeria, Tanzania, Uganda and Ghana, which have expressed in moving towards opening up their datasets would be highly strategic. One recommended outlet would be hosting an international conference on Kenya Open Data, providing further exposure to the concept of Open Data and allow other countries to benefit from lessons learned. As Angela Gachui articulates, Kenya has a responsibility "as the first African country to do this" to succeed and pave the way for future initiatives towards "Open Data East Africa, not just Kenya" (Gachui, 2011).

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