

## **Leveraging on hybrid ICTs for Improved Government Transparency, Accountability and Citizen Engagement**

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### **Abstract**

*An accountable government recognises the needs and interests of citizens and works towards advancing public welfare. Lack of accountability impedes both democracy and socio-economic development of any community. Citizen feedback is important as it boosts transparency and accountability in government. In this regard, ICTs can help expand the communication channel between the government and the citizens while fostering transparency and accountability in public services. This study proposes the use of hybrid ICTs as a tool for engaging citizens in monitoring their government. The evaluation of the proposed prototype shows that the use of ICTs in facilitating the citizens' engagement is still in its infancy in Tanzania and that more research work is needed to explore their feasibility in the Tanzanian context.*

**Keyword:** Citizen Engagement, Accountability, Transparency, e-government.

### **1. Background**

Citizen participation is the third inextricable element of the tripartite fundamentals of efficient and effective government service delivery: accountability, transparency, and participation (Kuriyan, Bailur, Gigler, & Park, 2013). Citizen participation plays an important role in helping to establish and maintain government accountability by organising and demanding government transparency, predictability, and responsiveness. Once citizens have more information and participation, they are likely to influence public officials to perform better. Citizen engagement builds trust in the government by promoting transparency and builds the bases for the accountability of the government to citizen (Archon & Hollie, Russon Gilman Jennifer, 2013). Transparency in governance is an important tool for combating corruption, exposing weaknesses in governance structures and encouraging participation in

governance (Finnegan, 2012). Citizen feedback on government services helps the government to keep track of its services to the citizens so as to clearly evaluate, improve and sustain them.

The delivery of public services in the developing countries such as Tanzania is often challenged by the lack of a mechanism of collecting feedback from the citizen regarding government services. Moreover, even when governments initiate measures aimed at improving the quality and effectiveness of service delivery, citizens often do not have the opportunity to provide inputs on whether the changes have achieved their desired objectives (Kirkby, 2012). This lack of feedback prevents the government from identifying areas that need improvement and eventually undermines transparency and accountability.

Efforts for poverty alleviation primarily should start with effective planning. Community development planners require bases of knowledge to create sustainable plans (*Björn-Sören et al.*, 2014). In this regard, citizens hold information that can help planners do their duty better.

The rapid rise in the use of technology among citizens could significantly complement citizen engagement and expand the relationship between the government and citizens. In Tanzania, on mobile phones penetration is reported to be at above 61 percent (TCRA, 2013). This penetration can be leveraged to strengthen the citizens' engagement with government issues. In fact, emerging ICTs have the potential of strengthening citizens' voice in governance by creating spaces for engagement, and promoting increased government accountability (NDI, 2013).

Despite the exuberance for technologies in developing countries such as Tanzania, there has been no formal government platform for citizens to voice their concerns and government to provide them with feedback. This gap has delayed efforts towards of advocating citizen engagement. Scholars tout Information and Communication Technologies (ICTs) as a cornerstone for bridging communication gap between the government and its citizens. Experience from the previous studies on the use of ICTs for citizen participation show a promising usefulness of cheap technology in crowd-sourcing citizen knowledge (Hollie Russon & Kevin, 2013; (BangladeshGov, 2009; (Worldbank, 2010; (Felipe & Boris, 2012; (Belle & Cupido, 2013).

In this regard, the use of technology that is already common in the community such as mobile phones can empower citizens to participate in the decisions that impact on their community

through processes that are more transparent, more inclusive and more effective than ever before.

## 2. Technologies for Participation, Transparency and Accountability

ICTs have the potential of transforming governance by fostering transparency and accountability. Technologies such as Web 2.0, mobile technologies and interactive mapping have a capability of addressing public problems by uncovering corruption and creating openness in the governance (David *et al.*, 2010). Table 1 presents ICTs for citizen engagement.

**Table 1: ICTs for Citizen Engagement**

Technology	Description	Example
Web 2.0	<p>Web 2.0 describes World Wide Web sites that use technology beyond the static pages of earlier Web sites Web 2.0 is grounded on architecture of participation than just presentation (Tim, 2005).</p> <p>The use web 2.0 technologies have potentials of expanding government-citizen communication channel as their adoption is on rise. Examples of these sites are Facebook, Twitter, Blogs, e-forums etc.</p>	<p><b>1. Burma<sup>2</sup></b> An interactive website for connecting citizens and their government in Burma</p> <p><b>2. Sithi<sup>3</sup></b> Cambodian human rights portal that aims to create a single map-based database of reports of human rights violations with contributions from human rights activists, organisations, and regular citizens from across the country.</p>
Interactive Mapping	An interactive mapping tool that visualises geo-tagged projects/events to facilitate monitoring.	<p><b>1. NMIS<sup>4</sup></b> Nigeria MDG Information System.</p>

<sup>2</sup>Burma: Available at <http://www.burmapartnership.org/>

<sup>3</sup>Sithi: Available at <http://transparency.globalvoicesonline.org/project/sithi>

<sup>4</sup>NMIS: Available at <http://nmis.mdgs.gov.ng/>

<p>Mobile Technology</p>	<p>Mobile based tools that exploit services such SMS and IVR to create environment for citizen to communicate with their government.</p>	<p><b>1. Uspeak</b> An SMS and Web-Based Constituent Engagement and Case Tracking Platform (Uganda)</p> <p><b>2. mRushwa<sup>5</sup></b> Corruption cases reporting tool (Tanzania)</p>
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This research work analyses how digital innovations can be leveraged to amplify citizens’ voices and empower decision-makers and planners with data to improve public services.

### 3. Challenges of Using ICTs for Citizen Engagement

Despite advances in ICTs and their effectiveness in closing the feedback loop between the government and citizens, there are challenges that hinder citizens from using ICT as an engagement tool. These challenges are:

- a) **User friendliness of the Platforms:** Some citizen engagement platforms are not user friendly and not accessible to some low devices such basic phones, and some were not designed to include requirements of people with vision disability (Finnegan, 2012).
- b) **Lack sustainability:** Some of the citizen engagement initiatives through ICT-based tools are not sustainable due to lack of serious support from the governments. Few initiatives established by CSOs fail as they do not compel the government to respond to citizen concerns (Kwami, 2013).
- c) **Low ICT Capacity:** Lack of access to ICT hampers the use of technology for government accountability projects. Furthermore, ICT illiteracy among community members hinders the adoption of citizen engagement practice through ICT(David *et al.*, 2010).
- d) **Lack of participation culture:** The absence of established culture for government-citizen dialogues causes so much fear among citizens that the government may ignore their voices (Seltzer & Mahmoudi, 2012).

<sup>5</sup>mRushwa : available at <http://mrushwa.com/>

e) **Privacy and security:** Online privacy, censorship and secure communications present challenges to technology-for-transparency projects. Technology-driven transparency projects need to be cautious in how they collect and use data, and ensure that participants know how to protect their right to privacy online (Finnegan, 2012).

### **3. Methodology**

A comprehensive literature review was conducted to understand the theoretical bases of citizen-government engagement. The articles that focused on the use of mobile phones and others on the learning theory concepts were chosen for review accordingly. The process of reviewing selected articles followed the ‘literature review steps’ as defined by Oates (2006): (Search->Obtain->Assess->Read->Evaluate->Record->Review).

Concepts gathered from the literature were conceptualised by designing a technology-based citizen feedback platform (CitizenVoice) to understand how ICTs can bridge the information gap between the government and citizens. March and Smith’s (1995) framework was used to conceptualise and represent techniques in proposing the CitizenVoice prototype.

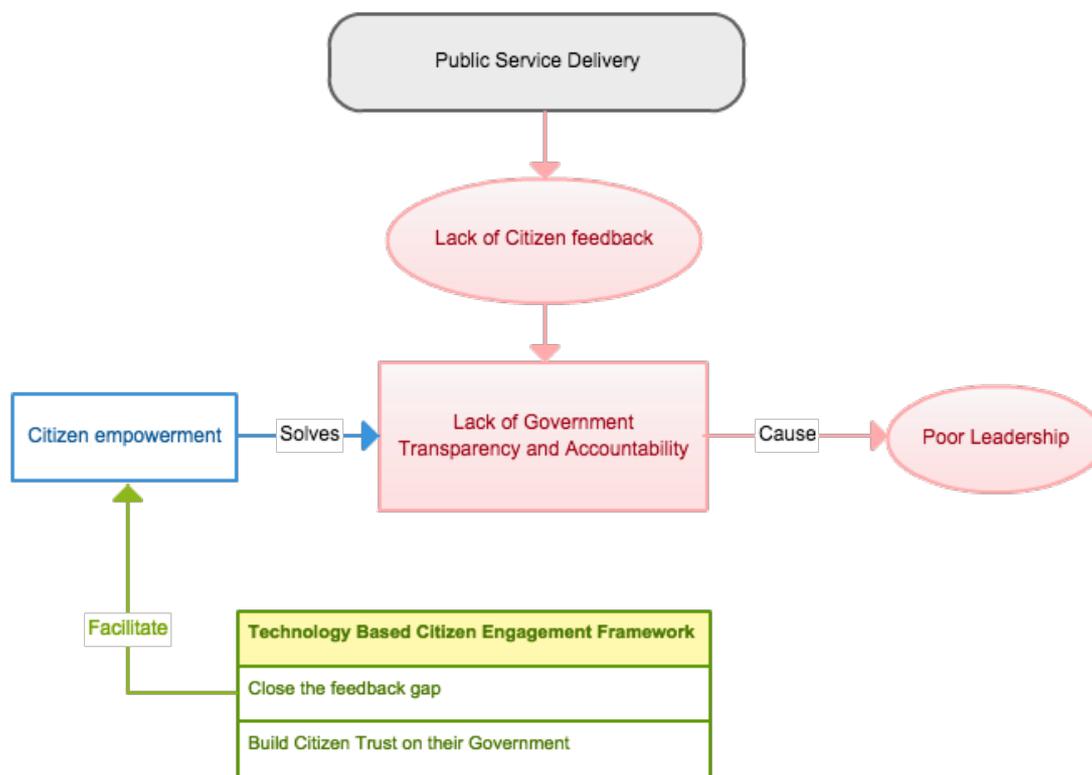
### **4. Results**

In this study a citizen feedback platform prototype was designed incorporating low cost technology such as SMS and web 2.0 technologies. The deployment of the proposed platform is deemed to empower leaders of constituents with the citizen feedback, which can help to understand problems and opportunities faced by communities.

### **5. Conceptual Framework**

Citizen engagement is the foundation of democratic values. When citizen engagement models are implemented effectively, more citizens are brought into the decision-making process, and this allows the government to be more responsive to community needs. Moreover, citizen engagement practice is important in building accountable and responsive government by creating space for citizen-government collaboration. Leveraging on various ICTs (Hybrid ICTs) in building citizen engagement models can effectively amplify citizen voice and increase government responsiveness and accountability (BangladeshGov, 2009). Figure 1

shows the conceptual framework of how citizen engagement through technology can lead to improved public services delivery:



**Figure 1: Citizen Engagement Conceptual Model**

## 6 .Proposed Citizen Voice Platform

This study proposes citizen engagement framework that conceptualises how various ICTs can be integrated to bridge the information gap between the government and citizens. Web 2.0 technologies such as social media and interactive maps have been combined with mobile technologies to create space for citizens to report and receive feedback from government officials on issues in their community.

## 7. Components of a CitizenVoice prototype

The CitizenVoice Platform is composed of several components. These include a central server, mobile reporting tool, web 2.0 tool and web portal. Figure 2 depicts the components of the proposed CitizenVoice:

- a) **Web 2.0 tools:** This provides web users with ability to report cases via web forms and also through social media page.
- b) **Mobile Tool:** This provides mobile users with the ability to report cases via mobile forms and also through short messaging services (SMS).
- c) **Central Server:** A Linux box installed with apache web server which hosts open source software called Freedomfone<sup>6</sup> and an interactive mapping tool. Freedomfone software is customised to allow for the creation and share audio content using Interactive Voice Response (IVR), voicemail and SMS. In CitizenVoice platform, Freedomfone is used to manage routing of responses to citizens in the format of text and audio. With help of telecom service providers CitizenVoice Platform handles communication between CitizenVoice and other actors (citizens, CSOs, Local government authority).
- d) **Web Portal:** This is web2.0 platform with interactive mapping of cases reported by citizen and their response status. The data that are published in a portal are aggregated and analysed in advance to simplify their consumption by end users. Third party agencies such as Civil Society Organizations (CSOs) can benefit from this data for the duties of advocating for better wellbeing of the citizens.

## 8. How CitizienVoice Platform operates conceptually

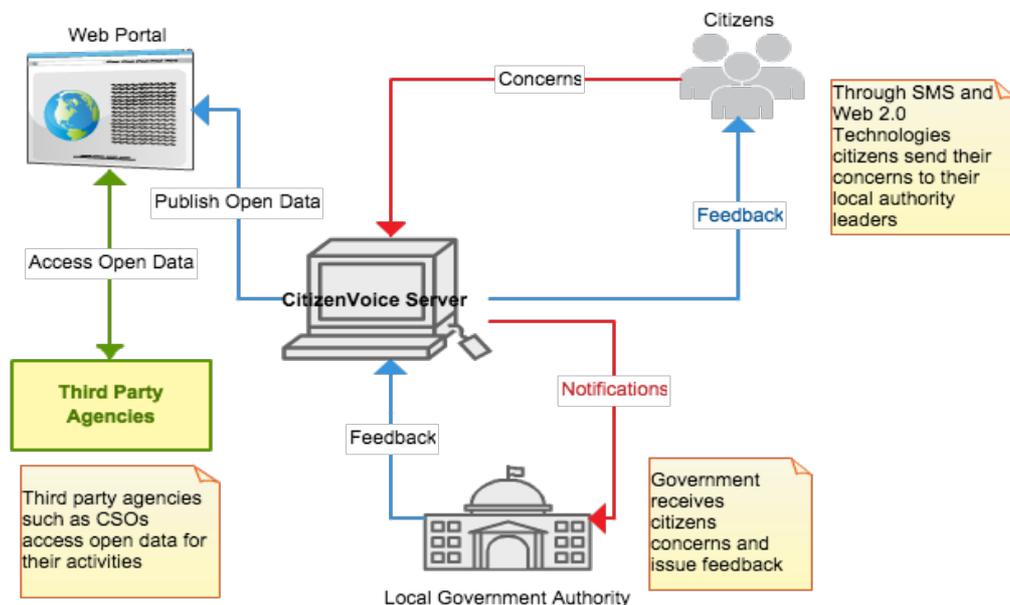
Citizens initiate a claim via SMS, mobile forms, web form or social media tweet. The CitizienVoice platform receives claims and analyses it in category (e.g. budget, social services, crime report, and opinion). Once the case has been analysed, the platform forwards the case to appropriate responder for example district medical officer, police station etc. When the responses are issued the case profile is updated to show the action taken and the citizen who reported is sent with notification about the action taken.

CitizienVoice platform aggregates the cases in locations and categories published as open data. The anonymity of the citizens is observed to ensure that privacy is protected. The platform provides a data Application Programming Interface (API) to enable flexibility in the

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<sup>6</sup>Freedomfone available at: <http://freedomfone.org/>

manipulation of the data published, for example, the generation periodic reports, categorical reports and comparative reports.



**Figure 2: Citizen Engagement Framework (CitizenVoice Platform)**

## 9. Evaluation of the CitizenVoice Platform

According to Hevner *et al.* (Alan R. Hevner, Sudha Ram, Salvatore T. March, 2004), there are different ways in which IT artefacts can be evaluated. These are functionality, completeness, usability, consistency, accuracy, performance, reliability and how it fits with the context. The evaluation process of this study is aimed at evaluating how CitizenVoice Platform fits with the context of the developing countries Tanzania as an example.

Scenario based evaluation technique (Babar, 2004) was used to assess the applicability of the CitizenVoice Platform in developing countries. Web platform was used to share the scenario and collect feedback from citizens. Making all Voice Count (MVC)<sup>7</sup> web platforms was used to collect users' opinions. In a period of first 14 days, the scenario received 44 votes and eight positive comments. CitizenVoice Scenario<sup>8</sup> ranked 91 out of more than 180 scenarios

<sup>7</sup>MVC Available at <http://www.makingallvoicescount.org/gic2015/>

<sup>8</sup>CitizenVoice Scenario Available at <http://ideas.makingallvoicescount.org/a/dtd/Citizen-Voice-Platform-Voicing-Citizen-Concerns/94501-26650>

posted at the MVC portal. Despite the few votes from the people's perspectives, the feedback still shows the applicability of the CitizenVoice Platform in the Tanzania context.

## **10. Impact on policy and practice**

Leveraging on ICTs to foster citizen engagement will help marginalised and disadvantaged groups to voice their concerns to their local government leaders without unnecessary barriers. This development is likely to promote equality by giving every citizen a voice regardless of gender or disability so that he or she is heard by the government. Expansion of communication between government and citizens will accelerate the success of the government projects by creating channel for feedback mechanisms whereby the beneficiaries (citizens) will be able to monitor their accomplishment.

## **11. Conclusion**

Leveraging on ICT in public administration matters such as public project tracking and budget decision process make citizens more inclusive in monitoring their own government, which in turn catalyses more accountability and transparency and improves communication between local government actors, civil society, and citizens. However, there are issues that need to be resolved to ensure citizens are made aware of the effectiveness citizen engagement through ICT-based platforms. The issues that need government attention are perceived usefulness; perceived responsiveness; perceived relevance; quality and reliability of the information; trust in the technology; perceived risk to user privacy; perceived reliability of the mobile network and the ICT-based system; trust in the government; and perceived quality of public services; perceived risk to money; perceived compatibility, and self-efficacy in the use of ICTs. On the whole, the use of ICT platforms on civic engagement is still a nascent field without enough research behind it to make solid claims for its usefulness. Future work needs to explore deeply the impact and the ways of addressing challenges of applying ICT in governance particularly the mobile-based technology that has already been adopted widely.

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