Building Foundations before Technology: An Operation Model for Digital Citizen Engagement in Resource Constrained Contexts

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Abstract: Citizen engagement in developing countries is seen as a 'game changer' for development, as citizens can play a key role in contributing to service delivery decisions that hold government accountable for their actions. Recently, there has been a drive to adopt digitally innovative approaches to support social accountability monitoring in developing countries. This is especially pertinent with the growing use of technology, specifically mobile technology, where in some rural areas it is estimated that approximately 80% of the population own a mobile phone. However, digital citizen engagement in developing countries is more complex than imagined, as such initiatives are faced with a lack of awareness of civic rights and education, despondency among citizens based on a lack of effective channels to hold government accountable, a lack of government responsiveness, and a lack of capacity to use and apply innovative approaches effectively. This paper presents a case study of a digital citizen engagement project called MobiSAM (Mobile Social Accountability Monitoring), which uses mobile technology to support two-way communication between citizens and local government, on basic service delivery issues. The operation model of MobiSAM is based on five key components which include: building government responsiveness and citizen engagement capacity, stakeholder engagement, iterative and incremental technology development, citizen education and training, and comprehensive evaluation for learning throughout the project. What is unique about this project is that it has evolved from lessons learned in phase 1.0 after 4 years of operation, to phase 2.0 that was initiated in 2016, hence building on lessons learned and reflecting on successful and challenging aspects. The operation model is not static, as it evolves as the project team learns to operate within the uncertain context. The lessons learned from the MobiSAM approach can be used to support the implementation of digital citizen engagement initiatives in similar global contexts.

1. Introduction and Background

Globally, there has been a "… thrust for greater transparency and accountability around all institutions that deal with public or private goods and services" (Naidoo and Henning, 2012, p. 5), with recent examples across both the developing and developed world. Citizen engagement is widely promoted as a 'game changer' for development (Gaventa and Barrett, 2012), as the voiceless become empowered to evoke change in society. Citizen engagement in local government is an important tool in facilitating and achieving two main objectives; accountability and empowering citizens, to enable service delivery improvement (Carothers and Brechenmacher, 2014) (Grandvoinnet et al., 2015); (Pandeya, 2015)). Building citizen engagement should be examined by identifying ways to increase participation, such as: showing results from engagement, designing multiple channels of participation, providing multi-tiered levels of engagement, reinforcing a sense of civic duty and collectiveness, and getting pre-commitment from citizens (Spada et al., 2015). Coupled with this, it is essential that local government engages in a two-way interaction with citizens and the private sector, hence giving citizens a stake in decision-making with the objective of improving service delivery outcomes. The implementation of citizen engagement initiatives are instrumental in lobbying for intrinsic motivation and capacity to hold government accountable for its services. Furthermore, government responsiveness and awareness can become driven given the right channels of information and communication are available to both citizens and government.

Figure 1 illustrates the key drivers of state/government and citizen action that determine the effectiveness of citizen engagement and government responsiveness (Grandvoinnet et al., 2015). The daily business of government is constructed from information. Information is a resource that helps to ensure the presence of accountability, the effective management of operations, and participation of citizens, hence allowing the public to participate in the governance of their country. In Figure 1, **information** (top right-hand corner) is a key aspect that can be supported by technology, as it plays a role in:

- linking citizens and state action – through accessibility to service delivery information, framing of the right information, and trustworthiness.
- linking citizen-state engagement – information on the existence and accessibility of the interface mediators, and information that strengthens the credibility of the interface with key stakeholders (citizens and officials).
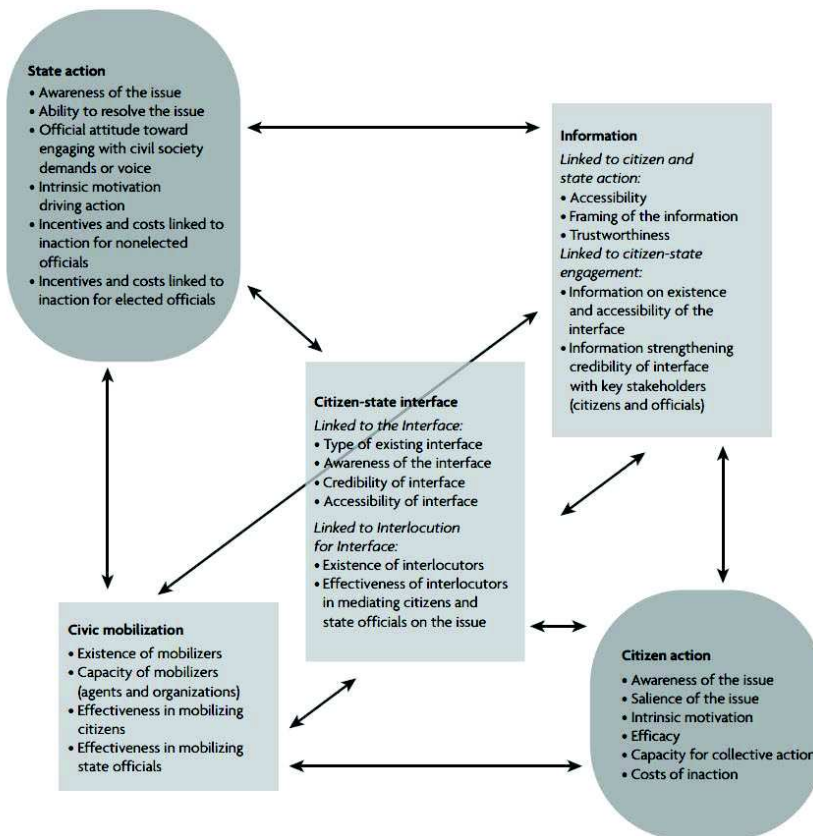

Figure 1: Assessing Drivers of State and Citizen Action (Grandvoinnet et al., 2015)

Information and Communication Technology (ICT) is not an only solution to the many challenges being faced in the service delivery sector in developing countries; however, an ICT enabled environment could be one of many significant *means* to support service delivery. When ICTs are used to support citizen engagement, this is referred to as Digital Citizen Engagement (DCE) (Haikin et al., 2016):

> *"The use of new media/digital information and communication technologies to create or enhance the communication channels which facilitate the interaction between citizens and governments or the private sector"*

In a review by the Transparency and Accountability Initiative of the global use of technology for transparency and accountability, (Avila et al., 2010) highlighted a number of key findings, including:

- Online and mobile technologies are being used to increase transparency and accountability;
- Technology is successful in increasing transparency and accountability due to its speed;
- When projects work collaboratively with government or service providers, transparency and accountability projects are more successful;
- Despite early success, some projects fail due to the lack of an effective methodology.

When we consider the use of mobile devices to increase citizen participation in government, we see that the new platforms are opening up new possibilities and spaces for different forms of political discourses and networking (Ndlela, 2009). Within Africa, there has been a dramatic rise in the use of mobile phones in the past 20 years. South Africans are now using mobile phones more than any other modern and traditional ICT

(Hutton, 2011). As well as access to mobile devices, South Africa, for instance, has also been ranked as fifth in the world for mobile data usage (Hutton, 2011), ahead of countries such as the United States of America, which ranks seventh. Leveraging off these statistics, this explains the ongoing trends associated with the use of mobile devices for citizen recruitment and engagement. For example, Ushahidi in Kenya was designed to "harness the benefits of crowdsourcing information (using a large group of people to report on a story) and facilitate the sharing of information in an environment where rumours and uncertainty were dominant" (Okolloh, 2009). Another example is a mobile application called *FixMyStreet*, based in the United Kingdom (https://www.fixmystreet.com/). Residents use this platform to report on issues experienced on their street, such as, broken pipes, potholes, etc. These reports are directed to local councils, who then communicate when and whether the problem has been addressed.

Despite the potential of mobile devices, access to a new technology is not enough. As (Otieno, 2009, p. 22) notes, "the reality of widespread poverty, language barriers, and cost issues" are important to remember when considering the use of mobile phones in developing countries. (Wasserman, 2011) also warns that access to mobile devices does not guarantee increased participation. A lack of appropriate processes and approaches for *examining the context*, can lead to a mobile technology initiative just appearing as a *beautiful* solution, without understanding the *broader dynamics* of the problem (or symptoms of the problem) it is trying to address, and the positioning of such an initiative in addressing complex problems linked to service delivery (Enserink et al., 2010). Key to the success of such an initiative is appropriate problem identification and demarcation – especially to build capacity and buy-in for government responsiveness. Furthermore, examining contexts also requires identifying ways to increase participation, such as: showing results from engagement, designing multiple channels of participation, providing multi-tiered levels of engagement and civic education, reinforcing a sense of civic duty and collectiveness, and getting pre-commitment from citizens (Spada et al., 2015). The above activities are quite holistic, requiring collaboration with existing networks (municipal officials, media, NGOs, and citizen networks), as well as building capacity of both government and citizens to engage.

2. The Challenge of Digital Citizen Engagement in Resource Constrained Local Government

DCE relates to e-government, but has a more focused view based on its purpose. Like e-government, DCE supports the improvement of service delivery and information sharing, as citizens are able to participate in making decisions through ICT use (International Telecommunications Union, 2008); (Noveck, 2009)). However, with the large amount of investment that has been spent in the implementation of e-government, the efforts have not yielded the expected benefits to all stakeholders involved, and as a result the idea of DCE can be met with much scepticism, especially in resource constrained contexts at local government level ((Backus, 2001); (Pina and Acerete, 2005); (Dada, 2006); (Heeks, 2006); (Nkohkwo and Islam, 2013)). The challenges do not only emanate from the idea of using technology to interact with government, but also the idea of even applying citizen engagement. When it comes to addressing complex social or technical questions the value of citizen engagement is questioned (Spada et al., 2015). One of the challenges to citizen engagement relate to the sensitivity and political influence in the policy making process, creating expectations that are not reasonable within the constraints of local government ((Irvin and Stansbury, 2004); (Callahan, 2002)).

The inequalities in developing countries, for example, in South Africa (SA) are especially prominent in marginalised contexts (von Lieres, 2007). SA citizens do not have a voice that is heard, nor taken serious, especially at local government level. There is a dire lack of awareness of civic rights, and limited programmes that support civic education, to build the capacity of citizens to participate. Citizens have now become despondent, living in conditions that infringe on their human and civic rights ((von Lieres, 2007); (African Centre for Citizenship and Democracy, 2011) – at times, lack of service delivery on urgent aspects can last for 3 years. Citizens do not feel empowered to report, and with the existence of corruption and political influence, there is a sense of helplessness. *Effective* channels and processes to monitor and hold government accountable for the services they provide typically do not exist, and if there are channels for engagement, citizens are not aware of them. On the other hand, citizen engagement efforts have been constrained by the fact that few are actually coordinated sufficiently to encourage government capacity to respond to citizen voice (Mansuri and Rao, 2013). The capacity of local government to respond to citizen demands will determine the outcomes of a DCE initiative. Engaging with local government through a strategy formulation process is essential to identify challenges, objectives, and means to achieve municipality objectives that can be

supported by the technology initiative. Understanding organisational culture, and transforming it can only be done through engagement with government and citizens towards an agreed understanding and commitment to the process of transformation in service delivery. The existence of a unified view and understanding, by varying stakeholders, on the advantages of broadly adopting and integrating ICTs to support service delivery is essential (Matavire et al., 2010; Saha et al., 2010).

DCE projects should therefore, move their approaches from a tactical social accountability approach to a strategic social accountability approach. A tactical approach is an exclusively demand-side intervention (information-led, voice-only) that tends to focus on the symptoms rather than the underlying causes of government failure, such as, a lack of skilled staff, capacity, appropriate decision-making strategies (Fox, 2014). Strategic social accountability on the other hand, focuses on engaging citizens and government in disseminating information that is actionable, in coordination with enabling collective action and citizen voice, together with governmental reform to improve public sector responsiveness (Fox, 2014). A dynamic holistic approach, that embraces an iterative and incremental approach to introducing technology to resource constrained and marginalised contexts is therefore fundamental to implementing DCE (Backus, 2001; Dada, 2006; Heeks, 2006; Peixoto and Fox, 2016).

3. Research Methodology

A pragmatic philosophical approach (Morgan, 2014) was applied to the study, using a case study research strategy. A case study of the MobiSAM project enabled an investigation into *how* the project operated, and *why* it applied particular practices to support its ongoing operation within the limits of a resource constrained local municipality (Yin, 2009). The qualitative data collection tools used included participant observations of project meetings, government forums, team practices, workshops, etc. The researchers also observed emergent practices of stakeholders as the different stages of the project evolved. Finally, informal discussions, and documentation of the previous phase of the MobiSAM project were consulted for further reflection. The analysis of data is descriptive, and thematic in nature, also based on the experiences of the researchers.

4. Case Study: The MobiSAM Project

MobiSAM, which stands for Mobile Social Accountability Monitoring, is a project that uses mobile technology to supports two-way communication between citizens and government, on basic service delivery issues. It was founded in 2012, by local researchers in South Africa, who were frustrated by the growing issue of water service delivery in their municipality (Thinyane, 2013). Project activities are currently operating in two municipalities, in the Eastern Cape Province of South Africa (known to be one of the poorest provinces). The MobiSAM technology incorporates both a reporting interface for citizens (via a mobile application, website, and SMS), and also a Ticketing function (mainly used by the municipality to address internal communication challenges). The project implementation is categorized into two phases, where phase 1.0 focused on citizen participation, applying an adversarial approach to get government to respond to citizens. However, lessons learned from phase 1.0 revealed a lack of government responsiveness, coupled with corruption in the local municipality, which at that time had been placed under administration. Learning from phase 1.0, the next phase 2.0 was initiated in May 2016, applying a more holistic approach to building citizen engagement, as well as government responsiveness.

During the process of implementing phase 2.0, some lessons were learned that provide a reflection focus and contributed to the operation model that currently guides the project. This operation model is also based on a reflection of aspects of the project that worked well, as well as aspects that were challenging within the constraints of the context and the project itself. When implementing a DCE project, the constraints faced are actually two-fold: the project activities are attempting to get citizens to engage and government to be more responsive to citizens, and the project is attempting to encourage and build capacity of citizens and government to use technology, even when confronted with factors such as limited resources and skills to adopt such technology. Given the complexity of DCE, the MobiSAM project team had to apply a holistic approach to the project, allowing for flexibility and learning to occur through various processes and activities, that may be seen as individual but at the end have to be integrated (at times simultaneously) to achieve objectives and sustain the initiative. The lessons learned are discussed as follows:

i.) **Building Citizen Awareness, Hope, Confidence and Participation:** The MobiSAM project aims to support two-way communication between citizens and government, but most important build the

capacity, awareness and motivation of citizens to participate and engage with government. The project has learned that three key aspects build on this: citizen education and training, stakeholder engagement, and digital citizen strategy formulation with both government and citizens. These aspects provide an indication that building foundations before the implementation of ICTs in citizen engagement is fundamental to the success or sustainability of DCE initiatives. This is also clearly supported by (Toyama, 2011), who speaks about the needs to consider differential access, differential motivation to use the technology, and differential capacity to maximise use and purpose. What is also fundamental to the nature of such projects is to be flexible and incremental. In this sense, projects need to be aware of the evolving nature of the context, and hence allow for flexibility and change in the three aspects of citizen education, stakeholder engagement, and an evolving strategy for the project. The following activities were applied (and continue to be applied) to build on citizen awareness, hope, confidence and participation:

- *Civic Education Training* – Local citizens (mainly activists), civil society organisations (CSOs), and local media attended a workshop run by the project. The workshop topics included presentations/discussions on citizen rights, local government structures and plans, and what and how citizens can engage with government. A legal resources organisation was also invited to present on how citizens can work with them to legally hold government accountable. Feedback after the workshop was quite positive, and participants felt that they truly gained knowledge. An example of success is that one of the participants used her new knowledge to hold her ward councillor and committee to account at a public meeting for their lack of support. This is especially significant in marginalised wards, where citizens are typically despondent and do not know their rights. The workshop also presented the MobiSAM technology, which allowed workshop participants to provide suggestions for how it would best work in their marginalised contexts. In this case, workshop participants were not given the technology to use, without first understanding the value and purpose of its support. Participants therefore felt capable to actually comment on their concerns and what they felt were limitations of using initiatives/technology, such as, MobiSAM, in their communities; but also most importantly the major barriers to citizen participation and social accountability.

- *Working through Community Ward Liaisons:* Community ward liaisons were chosen to be representatives of the realities of their wards. The wards in the municipality consist of rural areas and townships (which are socially and economically challenged), to more affluent wards in the main town. The MobiSAM project could not generalise participation, but had to treat each ward as unique, hence building from an understanding of the particular contexts, in collaboration with selected ward liaisons. Ward liaisons were identified in the citizen education workshop, and with assistance from local CSOs already involved in community projects in the Municipality areas.

- *Strategy Formulation* – Typically in e-government projects in developing countries, the strategy for implementation of the project is developed by the project team and few selected stakeholders, with limited or no input from end users (Naidoo, 2007; Twinomurinzi and Ghartey-Tagoe, 2011). This has had an effect on the success or sustainability of such projects. Based on lessons learned from Phase 1.0, the MobiSAM team implemented a different approach by jointly developing the strategy for MobiSAM with citizen representatives. A separate workshop was held with Citizens, CSOs, and local media to strategise how MobiSAM would best work in municipal wards. It was important to place participants in an environment where they felt comfortable to discuss issues/problems, and identify possible objectives and approaches for implementing MobiSAM in their contexts. It was the first time local CSOs had been brought together in one meeting to network, collaborate, commit to partnerships, and strategise – most local CSOs do not collaborate, even when they have shared interests. Given the conflicting opinions between citizens and municipal staff, three strategy workshops were held in total: with citizen representatives; with municipal staff; and a final joint strategy workshop with representatives of all stakeholders

ii.) **Building Government Responsiveness:** Lessons learned from phase 1.0 of MobiSAM highlighted the need to build government responsiveness. It was found MobiSAM phase 2.0 had to build on existing relationships in the municipality from the previous phase, to develop government buy-in. This is still developing, but so far the MobiSAM team has made progress through the following:

- *Project Champions:* Government project champions are based within the municipality. They do not only lobby for the project to support municipal operations, but also provide the project team with a better understanding of processes, stakeholders, and constraints. The Communications Officer in the Municipality has played a pivotal role in supporting the implementation of the project – she was also one of the few members of staff that received MobiSAM training in phase 1.0. Coupled with this, a supportive municipal manager ensures municipal staff cooperate with MobiSAM project activities – which was a challenge to achieve given the project was met with much scepticism.

- *Invitation to review and adjust the Communication Strategy and Policy*: The MobiSAM strategy team was asked by the Communications Officer of the Municipality to assist in reviewing and adjusting their communication strategy and policy to integrate MobiSAM. Furthermore, the MobiSAM strategy team made recommendations for how best the communication strategy and policy could reflect two-way communication between citizens and government, as well as mechanisms for how this could be achieved. Building on existing strategies and policy in the municipality is instrumental in enabling local government to understand the role MobiSAM plays in supporting two-way communication with citizens.

- *Strategy Formulation*: As mentioned earlier, there were three workshops held to engage stakeholders. The municipal strategy workshop was successful in understanding how MobiSAM could best work internally within the municipality.

iii.) **Iterative and Incremental Development of the System:** Based on the findings of the baseline study (see point iv. below), strategy formulation workshops, and evaluations undertaken as part of phase 1.0 of MobiSAM, an iterative and incremental approach to system development has been used. The key changes that are being made as part of phase 2.0 is the inclusion of a ticketing system into MobiSAM, to allow government and citizens to track the progress of service delivery complaints as they are handled by the municipality.

iv.) **Continuous Learning through a Comprehensive Approach to Evaluation:** The management and implementation of DCE initiatives is confronted with contextual uncertainty and complexity. As a result, such projects have to be flexible to change; however, flexibility requires a structured approach to learning throughout the project, as well as post-implementation to adapt to change in the context that can influence the sustainability of such initiatives. A comprehensive evaluation is applied throughout the life of the MobiSAM project, based on the Rural ICT Comprehensive Evaluation Framework (RICT-CEF) (Pade-Khene, 2016) that has been developed and previously applied in other ICT4D initiatives by the Evaluation Manager. The evaluation has phases (domains) that connect from the beginning to the end of the overall evaluation, and hence provide a gauge of the evaluation's progress towards continuously contributing to a comprehensive evaluation of the iterative and incremental ICT intervention. The domains that make up the comprehensive evaluation cycle are (Pade-Khene, 2016): 1) *The Baseline Study, 2) Needs Assessment, 3) Programme Theory Assessment, 4) Process Assessment, 5) Outcome and Impact Assessment, 6) Scalability Assessment.*

The above discussion highlights the lessons that have been learned in the MobiSAM project, which are summarised in Figure 2, in an operation model of the project. As can be observed in Figure 2, the project encompasses more than just technology, but also mechanisms to manage the uncertainty and complexity of the context of DCE projects. This model and its components are not static, but evolve with changes in the environment (social, political, economic) – in this case the project has to apply an adaptive approach, learning the context and engaging with stakeholders continuously to sustain citizen engagement activities supported by technology. Four key aspects make-up the operational model:

1. *Citizen Education and Training*: In order for citizens to engage, civic rights education and awareness campaigns are essential to empower citizens to participate.
2. *Building Government Responsiveness and Citizen Engagement Capacity:* Government needs to be motivated to be responsive, and citizens need to understand and apply avenues of engagement.
3. *Stakeholder Engagement:* Engagement with local and national government, citizens, civil society, and local media.
4. *Technology platform development:* iterative and user-centered development of the system.
5. *Comprehensive Evaluation:* throughout the project and embedded in learning in the project.

Figure 2: MobiSAM Operation Model

5. Conclusion

Citizens can play a key role in evoking change and improvement in service delivery by local government through citizen engagement. In developing countries, avenues for engagement are often not as effective, mainly associated with a lack of two-way communication between citizens and government. Furthermore, when citizen attempt to engage with government, there is often a lack of government responsiveness. The use of technology, more specifically mobile technology, has been identified as tool to support citizen engagement, also enabling social accountability and transparency of government activities. When ICTs are used in citizen engagement, this is referred to DCE. In practice, project implementers need to be cognisant of the fact that a mobile technology initiative can just appear as a *beautiful* solution, if an effort is not made to understand the broader dynamics of the problem (or symptoms of the problem) it is trying to address, and the positioning of such an initiative in addressing complex problems linked to service delivery. A more holistic approach needs to be applied in the operation of DCE initiatives. The MobiSAM project reflected on some of its challenges/lessons learned in phase 1.0 and phase 2.0, which have contributed to the development of an operation model that guides its implementation. Four key aspects make up the model, which include: c*itizen education and training; building government responsiveness and citizen engagement capacity; stakeholder engagement; technology platform development; and comprehensive evaluation.* This operation model is not static but evolves with changes in the project environments and learning that occurs throughout the project.

Such a model can be reflected on and applied in citizen engagement projects confronted with similar contexts and challenges.

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