

The Loch Ness Model: Can ICTs Bridge the “Accountability Gap”?

Björn-Sören Gigler, Savita Bailur, and Nicole Anand



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Note

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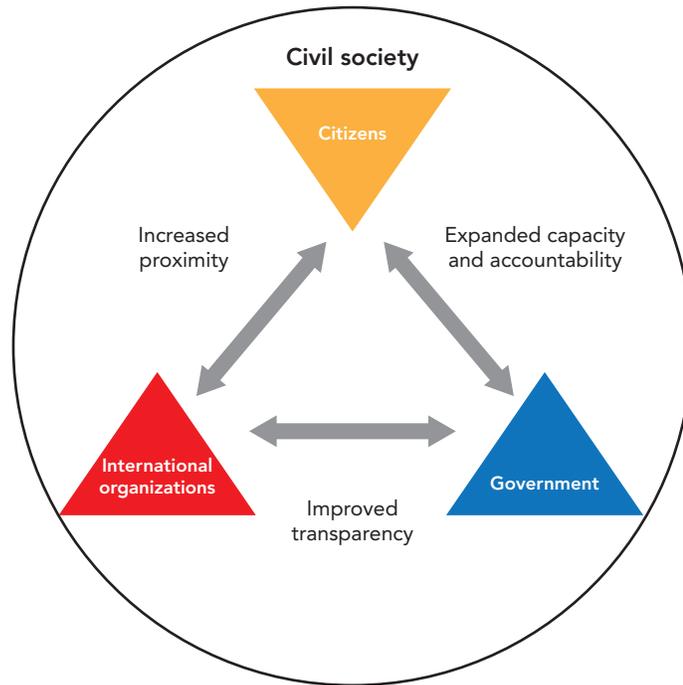
Can information and communication technologies (ICTs) empower through participation, transparency, and accountability and if so, under which conditions? Theory and practice demonstrate that technologies can empower citizens to hold governments and international donors accountable, but true accountability will only result from recognizing the gap between supply (governments, international donors, service providers) and demand (citizens, civil society organizations, communities) and considering how to bridge it from both sides. ICT-enabled initiatives have contributed to *shrinking* this “accountability gap,” yet in many cases, it remains open. In this paper, we develop a framework for analyzing how technologies can accelerate efforts to close the gap, which we call the Loch Ness model. We then offer reasons why the gap remains open and put forth recommendations for closing it.

Understanding the Dimensions of ICT-Enabled Citizen Engagement

ICTs have been used to collect, visualize, and analyze data (crisis mapping, mobile monitoring), to access and disseminate information (health kiosks, right to information hotlines), and to unify and engage communities (community mapping, community radio, online parliamentary forums). While non-ICT initiatives using similar approaches (community scorecards, citizen report cards, participatory budgets) have had success in many programs (Wittemyer et al. 2014), there are reasons to believe that ICTs can contribute to empowering citizens and government alike, shrinking the gap between them and drawing us nearer to an accountable governance system. Evidence suggests that ICTs can accelerate citizen engagement—the two-way interaction between citizens and governments or public service providers that gives citizens a stake in decision making with the objective of improving intermediate and final development outcomes (figure 1).

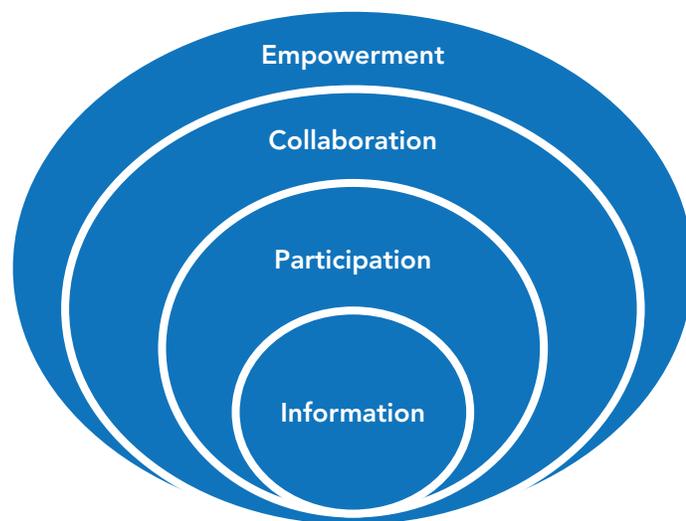
To examine how citizen engagement occurs with ICTs in practice, we draw on Arnstein’s ladder of citizen participation, in which informing and consulting take place at lower levels, while partnering

Figure 1. Strengthening Civic Engagement in Development with ICT-Enabled Feedback



Source: Custer, S., N. Novin, and E. Palumbo, 2011.

Figure 2. Dimensions of Citizen Engagement: Embedding ICTs



Note: Information = one-way flow of information to citizens to inform problems, alternatives, opportunities, and solutions; participation = two-way flow of information and meaningful citizen consent; collaboration = partnering and sharing between communities; and empowerment = multistakeholder coalition building.

takes place at higher levels and is more representative of real citizen power (Arnstein 1969). Combining this model with the Public Participation Spectrum developed by the International Association of Public Participation (IAP2)¹ and literature on civic engagement (Gramberger 2001; Reuben 2004), we develop a new lens that begins with citizen engagement facilitated through ICTs along four dimensions: information, participation, collaboration, and empowerment (figure 2). As one moves from information to empowerment, the effects of citizen participation on political decision-making increases.

The extent to which ICTs can act as an accelerator for civic engagement along these dimensions will be limited by barriers that prevent this process from occurring and depend on factors that create an enabling environment. Table 1 delineates the capabilities and limitations of ICTs to enhance the level of citizen participation in information sharing, participation, collaboration and empowerment.

To start, ICTs can reduce information asymmetries by providing improved access to relevant, timely, and actionable information (Kapur and Whittle 2009). Open and free access to information can lower transaction costs by reducing the time that citizens spend obtaining access to information or directly processing transactions, such as obtaining a birth certificate. However, simply enhancing citizens' access to information is insufficient for meaningful citizen engagement because it does not provide citizens with opportunities to participate in decision-making processes (Macintosh, 2003). As elucidated in Wittemyer et al. (2014), improvements in transparency frequently result in one-way flows of information sharing from government to citizens, but they do not lead to enhanced accountability. Thus improved access to information is a critical factor for closing the accountability loop, but it is not sufficient.

As discussed in Bailur and Gigler (2014) and Gigler (2014), assessing the impact of ICTs needs to move beyond issues related to simple access to ICTs and instead focus on evaluating the effects of the widespread use and generation of information by citizens on enhancing social accountability and facilitating collaboration and empowerment. These processes are enabled through (a) a two-way exchange of information (Martin 2009), (b) increased transparency and accountability with enhanced visibility of performance (Kuriyan et al. 2011), and (c) improved outlets for visualization and feedback (Martin 2009).

Within the broader context of human development, as discussed in Gigler (2014), the process depends on the expansion of people's *informational capabilities*—the ability to access and use information—and not solely on the provision of ICTs. The expansion of people's ability to analyze, evaluate, and act on information is a requisite for the process of individual and collective empowerment and thus can contribute to enhancing people's human capabilities (Gigler 2004). As Gigler (2014) outlines, enhanced access and use of ICTs are critical enablers; however, this approach focuses the analysis on changes in people's human development instead of the technologies. Here, the concept of '*information poverty*' stresses that the deprivation of information restricts the advancement of a person's economic, social, political and cultural freedoms. In this sense, the lack of information is a critical '*unfreedom*' which has far reaching repercussions on a person's well-being (Gigler 2004). While '*information poverty*' is only one dimension of poverty it plays a critical role for human development overall since it affects all other dimensions of people's well-being. Thus enhancing poor people's information capabilities can act as a catalyst for the enhancement in the economic, social and political spheres of a person's life and thus is a critical factor for development.

1. See <https://www.iap2.org.au/resources/iap2s-public-participation-spectrum>

Table 1. Opportunities and Barriers to Closing the Accountability Loop through ICTs

Dimensions	Enabling environment	Opportunities	Barriers	
Information	Trust Infomediaries Institutional change	Reduce information asymmetries	Informational capabilities: limited capacity to process and evaluate information and lack of ability to evaluate and act on information and data	
		Reduce transaction costs	Information poverty: marginalized and excluded groups with very limited access to information in spite of rapid diffusion of ICTs (mobile phones) in rural and poor communities	
		Improve access to information and enable timely access to information	Mismatch of information needs by citizens (local content, microdata) and the supply of information by government (policy, macrodata)	
		Enhance transparency	Serious constraints due to existing information ecologies and asymmetric power relationships (that is, information gatekeepers)	
		Democratize the flow of information—that is, direct information flows from citizens to senior policy makers in addition to access to “expert knowledge”	Political commitment from policy makers to receive and access information and lack of resources and time limitations, with many policy makers overwhelmed by information overload and lacking the resources to process new information	
Participation			Broaden the reach and be more inclusive	Digital exclusion and high levels of illiteracy of marginalized groups
			Motivate nontraditional stakeholders (such as youth)	Selection bias—that is, exclusion of disadvantaged groups and the elderly
			Encourage “active citizenship”	Temporary—for example, appearance and disappearance of online communities (crisis mapping)
			Enable more open and participatory deliberation through networks	Lack of incentives—need of citizens to see how their actions result in meaningful changes of policies or projects
Collaboration			Reduce the time lag between hearing voices and closing the loop (more instant access to information in ICT-enabled consultations)	Little evidence of vertical collaboration—connecting different communities (for example, civil society and governments)
			Connect people across geographically disparate groups	Lack of government capabilities or resources
			Create horizontal collaboration and bring together like-minded communities	Political economy, existing structures, and power relations
Empowerment		Reduce Information Poverty Intrinsic value in itself	Lack of government responsiveness due to culture, existing structures, and power relations	
		Enable a collective voice and collective action (crowdvoicing)	Citizens’ lack of agency, capabilities, trust, and organization	
		Participatory monitoring of programs and co-management of public resources	Lack of “vertical accountability” mechanism between government and traditionally excluded groups	
		Facilitate joint decision-making processes between government officials and citizens	Government’s lack of awareness, political will, human capabilities, resources, incentives, and institutional mandates	

At the same time, barriers that prevent ICT from “closing the accountability loop” are predominately socioeconomic and political in nature, although inevitably related to the appropriateness of technology. As illustrated in Wittemyer et al. (2014), Shkabatur (2014a), and Bott, Gigler and Young (2014), through crisis mapping, social media platforms, and technology-enabled public consultations, accelerated collaboration is perhaps the best understood contribution of ICTs. The “crisis mapper” community has demonstrated that ICTs can help to facilitate collaboration among like-minded, geographically disparate groups of volunteers who convene around a common objective, such as responding to a humanitarian crisis. After the earthquake in Haiti in 2010, the highly effective online collaboration of thousands of online crisis mapper volunteers, which resulted in the development of a comprehensive relief map of Port-au-Prince in just 48 hours, demonstrated the power of crowdsourcing and social networks (see Bott, Gigler and Young, 2014 for additional cases). However, the community is facing key challenges related to making crowdsourcing approaches sustainable over the long term. A critical issue that requires attention is how to move online technical volunteer communities beyond temporary response systems that focus on the immediate needs of a humanitarian crisis or natural disaster to providing ongoing support for long-term development challenges.

The extent to which ICTs can help to move beyond horizontal collaboration between like-minded groups by facilitating similar collaborations across different sectors, institutions, and traditionally dissimilar groups remains to be seen. In this context, it is critical to understand which institutional, sociopolitical, and cultural factors need to be addressed in order to overcome barriers to enhancing “vertical accountability” mechanisms between governments and traditionally excluded groups such as youth, minorities, or the elderly. In this context, sociopolitical factors, including the willingness of government to engage in a genuine process of political reforms, are critical.

Related to vertical accountability mechanisms in particular, the degree to which ICTs improve the relationship between citizens and government is contingent on trust relationships between key stakeholders. Frequently, lack of trust (see Table 9.1) between government, civil society, and citizens is the key impediment to technologies being effective in enhancing governance (Nye, Zelikow, and King 1997; Avgerou et al. 2005). Holzer, Zhang, and Dong (2004) argue that citizen trust in government declines when “first, the citizenry feel as though government officials abuse their powers in the interest of self-aggrandizement. Second, citizens feel disconnected from government. Third, government service delivery is perceived to be inadequate.”

Gigler et al. (2014) demonstrate how lack of trust by both citizens and government officials can be an impediment to closing the feedback loop. In Bolivia, for instance, indigenous peoples from remote communities expressed doubts about whether the government would listen and act on the feedback they provided through the OnTrack system. In spite of the government’s full commitment to the ICT-enabled citizen feedback program, the lack of trust among marginalized groups was one of the most challenging obstacles to overcome.

How Can ICTs Bridge Accountability Gap? The Loch Ness Model

Like our belief in the Loch Ness monster, a sea creature found in the Scottish Highlands so rarely that its very existence has become legend, the accelerating role ICTs can play to enhance accountability and human development is something we have seen but are still trying to fully understand and document. Key sources have provided theoretical frameworks and supporting empirical evidence on the role that ICTs can play in fundamentally altering the relationship between government and citizens. The findings presented here highlight how technologies are deeply embedded in existing sociopolitical local contexts and what preconditions must be satisfied for ICTs to accelerate the opening up of government and the closing of the accountability loop. The Loch Ness model provides a framework for an in-depth analysis of the conditions under which ICTs can empower citizens to hold government more accountable, enhance their access to and quality of basic services, and improve their overall human well-being.

We hypothesize that there are ten factors where ICTs play an important enabling role for closing the accountability gap and enhancing people’s human development (figure 3) and a process through which these intended outcomes are pursued (figure 4). As shown in figure 3, the Loch Ness model presents key *contextual* “Ness” factors (that is, readiness, appropriateness, willingness, and so on) and critical *enabling* “Ness” factors (that is, openness, inclusiveness, responsiveness); the former are constraining effects and the latter are effects of how ICTs can act as an accelerator for closing the accountability gap.

The framework is centered on four models of government as seen through an information lens. Each of these models is a form of an emerging approach to open government (derived from the dimensions in figure 2), with gradually increasing levels of citizen engagement and degrees of collaborative decision-making processes, from transparency to co-production.

Figure 3. The Loch Ness Model: Contextual and ICT-Enabling Factors

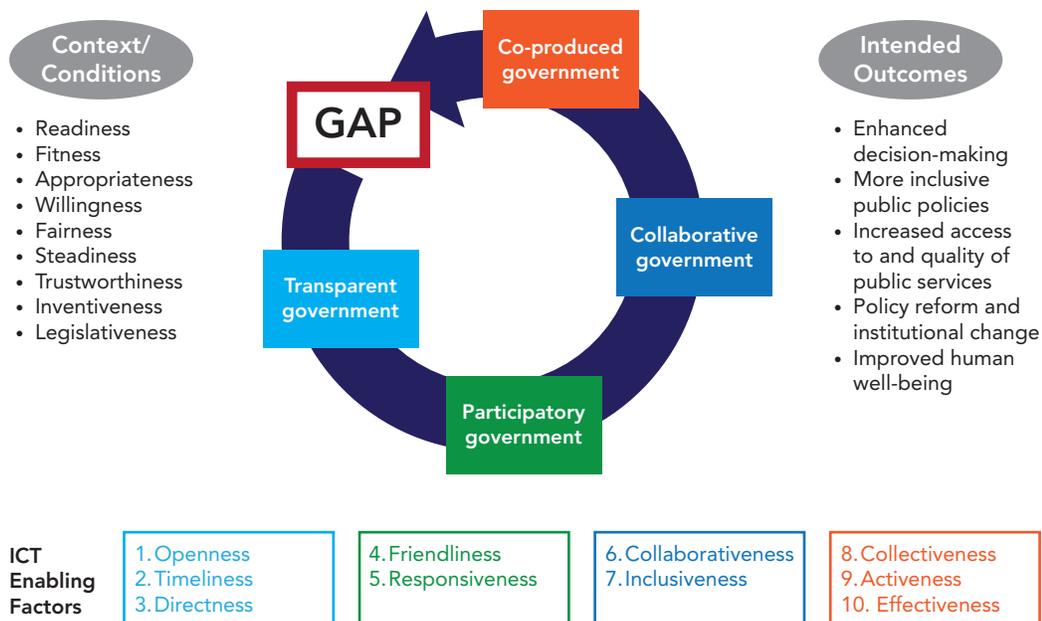
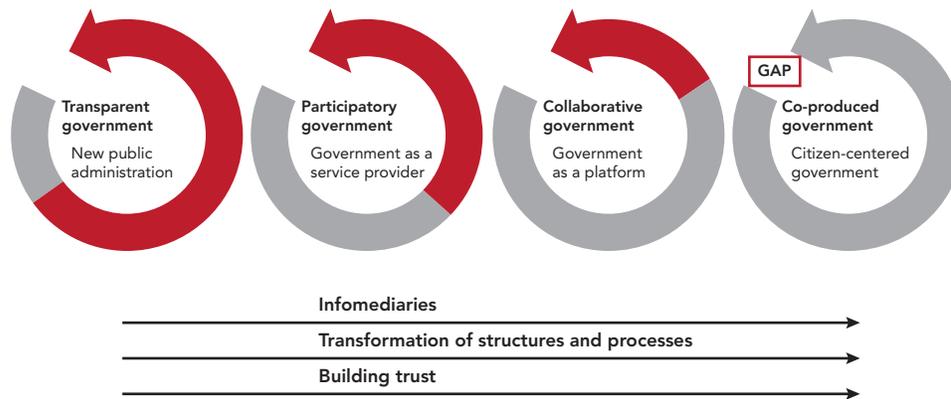


Figure 4. The Loch Ness Model: Process



We acknowledge that the levels of citizen engagement linked to each model of government may not be sequential; for example, collaborative governance may occur in the absence of transparent processes. Moreover, we recognize that the different stages of citizen engagement and the extent to which this leads to an increasing impact on decision-making processes is not based on a linear process and is dependent on many factors that are unrelated to ICTs, but are based on broader local political economy context. As such, the “gap” remains even in the co-production model of government (figure 4). Nevertheless, both the theoretical (Bailur and Gigler 2014; Gigler 2014; Wittemyer 2014) and the empirical (Shkabatur 2014a; Shkabatur 2014b; Bott, Gigler and Young 2014; Madon 2014) evidence presented demonstrate that the degree to which the access, generation, and use of information as knowledge are being “democratized” is central to collaborative public decision making and improved social accountability.

The aim of the Loch Ness Model is to delineate critical areas in which ICTs are uniquely positioned to support the supply side of governance; by promoting institutional changes towards a more open, inclusive and effective government; and the demand side of governance; by expanding citizens’ ability to meaningfully participate in decision-making processes to enhance their political, social and economic freedoms.

Central to the Loch Ness model is the *process* by which ICTs enhance civic engagement and help to transform how government operates. Figure 4 showcases how innovative uses of technologies can fundamentally redefine the relationship between government and citizens and move it toward a model of co-production, characterized by joint decision-making processes. New mechanisms of governance and accountability are central to this process—whereby the power of decision-making processes is increasingly diffused—with the ultimate goal of closing the accountability loop and enhancing human well-being. Figure 4 further incorporates key enabling institutional factors (that is, intermediation, trust building) and maps each to a corresponding model of government along the loop.

The Loch Ness model differentiates four types of open government according to level of citizen engagement and overall citizen-government interaction.

First, *transparent government* emphasizes providing citizens with open access to transparent and comprehensive information and data about government programs and public affairs (DeMaio 2009; Fung, Graham, and Weil 2007). Although enhanced transparency, in terms of the open and comprehensive access

to public information, is necessary for citizen engagement, Wittemyer et al. (2104) and Gigler et al. (2014) have illustrated that such a one-way flow of information is rather limited in enhancing accountability. This mode of government continues to treat citizens as passive recipients or beneficiaries of government-designed programs, representing a rather narrow interpretation of open government.

Many transparency initiatives have fallen short of been useful for citizens. Gigler (2014) offers reasons why mere heightened access to information without equal strengthening of informational capabilities fails to enable people to derive meaning from the information obtained and hence does very little to enhance people's human development. Figure 4 visualizes the limited contribution of increased transparency to closing the loop, as an important accountability gap remains at this level of the change process.

Second, *participatory government* stresses the need to move beyond merely achieving transparency and toward fostering the full and meaningful participation of citizens in government programs. This approach moves the role of government to that of a "service provider," with government officials listening to the concerns of citizens and responding as quickly and accurately as possible to their needs (Maier-Rabler and Huber 2011). At the forefront of this approach is an extensive process of public deliberation and civic participation facilitated by ICTs, which is argued to enhance the quality of government decisions regarding more effective public service delivery (Nam 2012, 17).

Coleman has argued that innovations in ICTs are changing the communicative relationship between the governed and the governors (Coleman 2007, 369). As the citizen feedback case study from Punjab presented by Gigler et al. (2014) has shown, ICTs can be instrumental for creating a vibrant community of participation and enabling a broad range of citizens to make their voices heard in policy debates. However, the experience from Daraja—an ICT-enabled citizen monitoring system of water points in Tanzania—demonstrates that social and cultural factors can prevent such feedback systems from being inclusive and thus from being sustainable in the long term. As in Daraja, marginalized women are frequently excluded from accessing mobile phones and lack incentives to provide feedback to an "abstract" and remote political system they generally do not trust.

The continuous lack of access to ICTs and informational capabilities by the most excluded and marginalized groups threatens to undermine the "inclusiveness" of programs and thus can derail the goals of improved e-participation overall. Along these lines, figure 9.4 again illustrates an accountability loop closed only to a certain degree. Participatory approaches frequently stand in stark contrast to existing bureaucratic traditions and cultures of government agencies. As such, they represent only the beginning of a much deeper and more meaningful process of civic engagement and empowerment.

Third, *collaborative government* aims to encourage active participation by citizens in the design and delivery of public services by fostering an approach that is based on (a) enhanced two-way flows of information and communications between government agencies and citizens, (b) partnership and cooperation among different government agencies as well as between government officials and citizens in the design and implementation of programs, and (c) high levels of civic engagement through a process of open and public deliberation about planned policies and programs (Nam 2012, 18). Here, government agencies act more as facilitators, providing a platform for all stakeholders to meet and collaborate around a common objective.

In the context of open government, Beth Noveck stresses that collaborative approaches highlight the importance of citizens' ability to participate fully in agenda-setting and decision-making processes

that are based on a “culture of participation” (Noveck 2010, 64). Technologies and social networks can play a critical role in promoting collaboration between government and citizens. As discussed by O’Reilly, technologies can be instrumental in *government as a platform*, where open data and collaborative technology platforms can enable “anyone with a good idea to build innovative services that connect government to citizens, give citizens visibility, ... and even allow citizens to participate directly in policy making” (O’Reilly 2010). Shkabatur (2014) and Bott, Gigler, and Young (2014) discuss crowdsourcing examples that represent this model in that they show how citizens move beyond being passive recipients of government solutions toward becoming active providers of data, proactively engaged in collaborating with government officials to find the best ways of responding to natural disasters or provisioning public services.

As shown in the case study of Rio Grande do Sul, highlighted by Gigler et al. (2014), ICTs can play a critical role in enhancing public deliberation about government policies. At the same time, as shown in the case study of CheckMySchool (CMS), the process of ICT-enabled public deliberation will be limited, and obstacles will continue to block the path toward fostering true and sustained collaboration between government and citizens.

A key limitation of the collaborative government approach, however, is that decision-making power continues to reside with policy makers, who often do not fully incorporate the results from the collaborative planning and design processes. While this model of government recognizes the importance of citizen contributions to developing new ideas, generating data, and finding solutions, it nevertheless is limited in its ability to democratize political decision-making processes. Important asymmetries in the distribution of power remain. While technologies and social networks can be a powerful instrument to promote nonhierarchical, flat, and collaborative approaches to policy making, they often cannot alter existing power inequalities between government bureaucracies, civil society, and citizens. Thus, in spite of enhanced levels of civic engagement and significant improvements in accountability, ICTs cannot fully close the loop, as displayed in figure 4.

Finally, the *co-production* or *citizen-centered* model of government represents the highest level of civic engagement and is characterized by a process of shared decision making between government and citizens. In this approach, citizens and civil society organizations (CSOs) are empowered to co-design and co-manage the delivery of public services with government officials. The concept of co-production, first coined by Elinor Ostrom in the 1970s, analyzes how this new form of government can support the “crossing of the great divide” between citizens, CSOs, and government to enhance the effectiveness and efficiency of public programs (Ostrom 1996). The co-production approach has been promoted by the New Economics Foundation, which offers the following definition: “Co-production means delivering public services in an equal and reciprocal relationship between professionals, people using services, their families, and their neighbors. Where activities are co-produced in this way, both services and neighborhoods become far more effective agents of change” (Boyle et al. 2010, 1).

Co-production essentially redefines the relationship between public service professionals and citizens from one of dependency to one of mutuality and reciprocity. Citizens become active agents in the design and implementation of public services. The existing human capabilities of individuals and the social capital of citizen groups are recognized as key assets in the design, implementation, and maintenance of public programs (Bovaird 2007, 846). At the center of this model is the empowerment of citizens to become

active agents in the process of development and the planning and provision of public services. It entails a sharing of power between government agencies, private service providers, civil society actors, and citizens.

New forms of accountability are critical for the success of such an approach. In the context of open government, this model requires an approach of *radical openness*, whereby all decision-making processes are based on open, free, and easy access to information as well as open and extensive processes of public deliberation. ICTs can play a critical role in both individual and collective empowerment (Bailur and Gigler 2014; Gigler 2014). ICT-enabled social networks can be leveraged to support nonhierarchical decision making where all citizens are given a voice and where processes are broadly dispersed in a decentralized network structure. ICTs can play a critical role as an enabler of social change, whereby government takes on a new role as facilitator of partnerships between different stakeholders and where citizens and communities are empowered to co-manage public resources and the provision of public services. However, as the ICT impact chain in Gigler (2014) highlights, the degree to which technologies can play a catalytic role for such a process of empowerment depends on the broader political economy, the existing information ecology, and multiple contextual and socioeconomic factors. As figure 4 shows, the co-production model has the potential to close the accountability loop almost entirely.

Information and ICTs are a critical part of an empowered active citizenship that can hold governments to account (Bailur and Gigler 2014, Gigler 2014). However, even in this model of government, the loop cannot be closed entirely, leaving an accountability gap. A genuine process of civic engagement, which is based on the sharing of power between government agencies and citizens, faces multiple challenges in implementation. Frequently, such a process requires fundamental cultural and behavioral changes within both bureaucracies and citizen groups. It requires the strengthening of human capacities and trust on both sides, which requires time and a clear vision from policy makers and civic leaders. Based on the evidence presented in this book, some critical factors influence the extent to which ICTs can be transformational for promoting a genuine process of civic engagement and empowerment. Based on the Loch Ness model, the following section summarizes the major areas where ICTs can act as a critical enabler for people's empowerment and closing the accountability loop.

Key ICT Enabling Factors

Actors interacting with ICTs will experience varying value additions. Citizen-driven approaches cite the advantages of openness, directness, activeness, and collectiveness. Government and service provider-driven approaches see value in ICTs for enhancing timeliness, responsiveness, friendliness, and effectiveness. Finally, in a co-created landscape, the major benefit will be in the form of collaborativeness.

Added value corresponds to one of the four models of government presented in the Loch Ness model. In a *transparent government*, ICTs tend to enhance openness, directness, and timeliness. In a *participatory government*, technology-enabled programs will showcase greater effects of responsiveness and friendliness. In a *collaborative government*, ICTs contribute to inclusiveness and collaborativeness. Finally, in a *co-production government*, ICTs show signs of heightened activeness, collectiveness, and effectiveness.

Openness and Directness

Openness is “central to digital democracy” and “predicated on improving access to government information” (Holzer, Zhang, and Dong 2004). Taking from this definition of openness, we can say that ICTs specifically increase the visibility of information by removing silos, leading to more active citizenship.

The cases presented in this book show that “transparency and accountability represent an opening up of organizations, people, and processes to scrutiny and feedback loops” (Smith 2013) and that technology has helped to facilitate this process unlike ever before. For example, in the case of I Paid a Bribe highlighted in Wittemyer et al. (2104), Indian citizens report bribe requests through a simple text message (short message service or SMS), phone call, or online report. Petty corruption was known only through isolated anecdotal evidence before ICTs enabled a collectivized, transparent front.

The work of Map Kibera (Shkabatur 2014a) additionally illustrates the power of technologies to make information transparent. By identifying and marking their roads, homes, and sanitation facilities, the residents of Kibera are empowered with information about their rights and access to them in a visual way that they absorb, trust, and desire to use for their benefit.

These examples also demonstrate a derivative of openness: directness or an ability to leapfrog barriers, particularly as they relate to communications, in order to reach a desired endpoint. I Paid a Bribe gives citizens direct access to a former government official who collects feedback on the corruption issues they face. In this way, the online platform and mobile technologies put citizen-government interaction on the fast track. Mapping efforts, particularly those that target crisis situations, offer similar evidence of directness. Specifically, they illuminate problems that CSOs can present to the responsible authorities for amelioration.

Timeliness

ICTs enable meaningful participation through timely information. They can redress the persistent problem of “time lags” through continuous exchange of information, which provides a more accurate picture of on-the-ground realities. In a similar vein, by generating almost real-time data, ICTs allow for midterm corrections, learning on-the-go, and generally greater flexibility in service provision and project implementation. As citizens gain access to the same information that international donors and governments have about project priorities, performance, and expenditures, their ability to exact accountability and shape future decision making is substantially strengthened (Kapur and Whittle 2009).

Bott, Gigler and Young (2014) invoke “real time” to convey the timeliness of data collection and subsequent action. To illustrate the value of timeliness through ICTs, World Bank project implementers liken real-time, crowdsourced mapping to “having [one’s] own helicopter,” because it enables immediate sense of events occurring in time and space.

Responsiveness and Friendliness

According to Vigoda (2002), “Responsiveness generally denotes the speed and accuracy with which a service provider responds to a request for action or information.” In addition to these quantitative metrics for assessing the quality of responsiveness is the qualitative element of friendliness. Leveraging ICTs to facilitate information flows can support more substantive civic engagement by encouraging recurring interaction through timely, precise, and friendly response.

Shkabatur (2014b) illustrates how a community monitoring tool on educational services in the Philippines called CheckMySchool uses ICTs to motivate friendly responsiveness. In a specific example, the existence of CMS fueled reports on the poor quality of toilets at local schools. This further incentivized authorities to respond to the reports holistically: first with inspections and second with funding to improve the facilities. The willingness of the government to act with urgency and thoroughness exemplifies the power of the ICT-led approach.

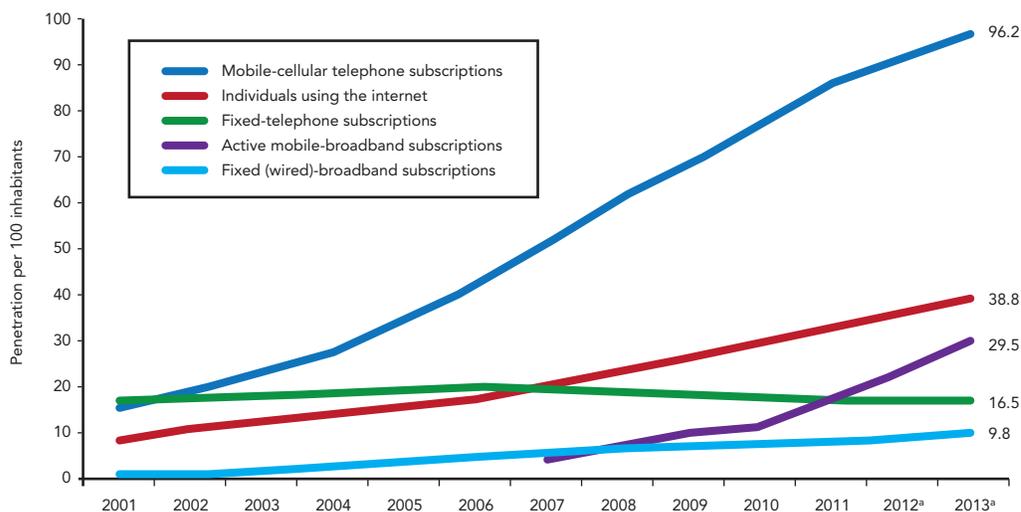
Inclusiveness

Exponential growth in social media, mobile phones, and the Internet has generated enthusiasm for harnessing this connectivity to reduce communication barriers and bolster both the direct participation of citizens as well as more communal civic engagement (Holzer, Zhang, and Dong 2004). Globally there has been tremendous growth in ICT penetration over the last decade, particularly with mobile phones (figure 5). In addition, there has been a decrease in tariffs for using ICTs. The International Telecommunication Union, using data from 143 countries across the globe, found that between 2008 and 2010 the price for a high-speed Internet connection dropped 52 percent, while that for mobile cellular service dropped 22 percent. The increase in penetration, combined with the decrease in tariff rates, suggests the possibility of a more inclusive role for ICTs.

The existing literature on e-participation outlines both the opportunities as well as the limitations to using ICTs for enhancing the inclusiveness of political decision making processes (Benkler 2006; Novak 2009; Fung et al. 2013). Several scholars have highlighted the limitations of ICT platforms to making political decision-making processes more inclusive. Often critical parts of communities do not participate in technology-enabled public participation process due to the lack of awareness, incentives or distrust in government. (Hindman 2009; Schlozman, Verba and Brady 2012).

On the other hand, innovative uses of technologies can broaden the ‘public sphere’ by facilitating a process to amplify voices in deliberation. New technologies have been noted to accelerate communication and information flows and empower people to participate in many-to-many communication (whereby traditional media such as radio or television are one-to-many broadcasting technologies), lower the cost of expressing a diverse set of views and enhance the openness of the public debate (Benkler 2006). For instance, a recent study on political participation through SMS in Uganda concludes, “ICT leads to significant flattening: a greater share of marginalized populations use this channel [through mobile phones] compared to existing political communication channels” (Grossman, Humphreys, and Sacramone-Lutz 2013).

Figure 5. ICT Penetration Rate, 2001–13



Source: International Telecommunications Union, World Telecommunication database, ICT indicators.
a. Estimate.

Evidence however also shows how ICTs can not only enhance processes of political participation however contribute to expanding the reach of public services (Smith, 2009 and Gigler 2001). The analysis presented above highlights that ICT can be under certain conditions a critical enabler for inclusiveness and enhance the reach of the delivery of public services and disaster response to marginalized and remote communities

Madon (2014) improves this understanding by offering field results from ICT-led primary health care systems in the southern state of Karnataka, India. The case study demonstrates the opportunities and challenges involved in the growing use of technologies in local kiosks to grapple with the problem of remote beneficiaries and make decentralized governance more effective.

Crowdsourced and live mapping of needs resulting from the major earthquake in Haiti in 2010 (Bott, Gigler and Young 2014) exemplifies how ICTs can involve citizens in crisis management in a way that was not possible in their absence. In this case, the leading nongovernmental organization (NGO) Ushahidi partnered with volunteers and used a local SMS channel for reporting. As a result, the effort included a population often overlooked due to time constraints.

Activeness and Collectiveness

Activeness can be understood as the citizen-led precursor to responsiveness or the way in which technology-mediated citizen accountability mechanisms enable citizens to “express their ideas, experiment with measures and actions, and ... raise awareness,” with or without prompting (Wien, Otjens, and van der

Wal 2003). The act of citizens engaging in governance matters is especially strong when their actions are conducted collectively; ICTs ease the collectivization of individual citizens.

Discussed in Shkabatur (2014b), the CMS platform stimulates citizens to engage with the education system and unites them to target problem areas uncovered through collective monitoring. The health care kiosks in Karnataka, as discussed by Madon (2104), have similar effects on citizen activity. The technologies prompt citizens to inform themselves about health service rights and needs. They also give local community members reason to act collectively and to track expected, in relation to actual, project outcomes.

Collaborativeness

Collaboration is perhaps the single most transformative power of ICTs. At a macro level, technologies are playing a significant role in the emergence of “communities of interest that go beyond the confinements or boundaries of the nation state and beyond mere rights” (Cammaerts and Van Audenhove 2005). In this way, actors are joining forces to collaborate on achieving common goals in an effective manner that was not possible in the absence of technologies.

The Open Government Partnership is a multistakeholder global platform designed to partner governments and civil society in the struggle for greater transparency and accountability. In its Articles of Declaration, member governments commit to “creating mechanisms to enable greater collaboration between governments and civil society organizations and businesses” and acknowledge that “new technologies offer opportunities for information sharing, public participation, and collaboration.” The acknowledgment of and commitment to collaboration, including through new ICTs, ensure that the value of collaboration is recognized across the globe.

On a micro level, Kuriyan et al. (2011) highlight how technologies can be used to enhance analytical and visualization tools that help users to understand raw project information. For example, platforms that have an aggregation function can facilitate dialogue among geographically disparate citizens and enable them to share and compare their experiences. Adding to this is evidence from crowdsourced mapping efforts (Shkabatur 2014a). The technology tools used in mapping projects allow multiple parties, including civil society organizations as infomediaries, citizens as beneficiaries, and governments as service providers, to work together toward achieving a common goal.

Effectiveness

Effectiveness through ICTs can be understood in three ways: first, the cost of project execution; second, the alignment of organizational goals with project outcomes; and third, the institutional uptake of changes made and tools used in the process.

Costs are a frequent barrier to project sustainability. ICTs reduce these costs significantly. For example, the Libya crisis mapping model (Shkabatur 2014a) is used in an “extreme-conflict environment,” exacerbating the level of difficulty to achieve impact. However, through the technology-led approach, it

becomes “successful in rapidly collecting valuable data at much lower cost than would have been possible through other means.”

Effectiveness can also denote “producing a result that is wanted” (Nam 2012). Nam extrapolates that projects are effective when outcomes are aligned with organizational goals, mission, and objectives. In this way, the emphasis is on the importance of project design, implementation, and monitoring and evaluation. Gigler et al. (2014) examine the U-report, a RapidSMS system designed to poll Ugandans on pressing community development issues. Owing to the ICT-enabled data collection tool, in a mere few weeks a poll received up to tens of thousands of reports, meeting the original objectives of the initiative.

The third interpretation of ICT-led effectiveness is the incorporation of changes by government into existing processes and actions. In the case of the Rural Alliances Project in Bolivia and use of the OnTrack system, as described in Gigler et al. (2014), rural producers provide timely feedback using broad-based technologies. The project is made effective by the government implementation officers who adapt and absorb the project by leveraging the same tool to promote internal goals, including strengthening economic partnerships for the rural poor.

Effectiveness will only change in the presence of certain contextual conditions, such as well-understood organizational objectives and an enabling political economy. Barriers related to these conditions are structural in form, uniquely local, and difficult to alter. They are discussed in further detail in the following section because the persistence of the accountability gap can be attributed in large part to them.

Constraints on ICTs: A Door Still Ajar

While technology has the potential to lower barriers, facilitate multidirectional exchange of information, as well as increase transparency and accountability through access to data for visualization and improved communication, its limitations must also be recognized. These include the intertwined challenges of elite capture and digital exclusion, which arise as a result of limited access to ICTs, poorly designed systems, constrained information capabilities, and low citizen motivation (table 2).

Table 2. Contextual Constraints

<i>Type of constraint</i>	<i>Indicator</i>
<i>Socioeconomic and political</i>	
Willingness	Does the government have the political will to implement reform?
Fairness	Do citizens have the opportunity to participate in government decision-making processes in a fair and representative manner (participatory budgeting)?
Trustworthiness	What is the level of trust between citizens and government?
Incentiveness	What are the incentives for citizens to engage?
Fitness	Do citizens have a minimal level of digital literacy and informational capabilities to participate in decision-making processes in a meaningful way?
Legislativeness	Does an enabling legal framework exist at the country level (access to information law)?
<i>Technical</i>	
Readiness	Does a certain level of e-readiness exist at the country level (diffusion and use of ICTs)?
Appropriateness	Are the technologies appropriate for the local socioeconomic context (use of traditional media)?
Steadiness	Are the ICT programs financially and socially sustainable in the long term (community ownership)?

Social, Economic, and Political Barriers: Limited Access and Use

Due to economic and social barriers, the “beneficiaries” of development assistance often do not have access to the requisite hardware and software. Insufficient broadband and lack of connectivity are acute barriers to access among communities and citizens living in lower socioeconomic circumstances or in rural and remote areas (United Nations 2012).

Socioeconomic conditions further influence the *use* of technologies by communities. According to a recent survey of 2,253 U.S. adults, “The well-educated and the well-off are more likely than others to participate in civic life online just as those groups have always been more likely to be active in politics and community affairs offline” (Smith 2013, 1). This study suggests that technology has not acted as an equalizer for civic participation because its use will remain higher in rich communities, reinforcing the status quo.

Technology itself may also become a barrier to participation; incentives to engage will disappear when the technology needed to create or access information is too expensive (Gigler, Custer, and Rahemtulla 2011). In sum, with little knowledge of the “communicative ecology” (Tacchi, Watkins, and Keerthirathne 2009) or greater environment in which the ICT is grounded, designing a citizen engagement mechanism will be difficult, especially when done at a distance—geographically and politically—from the user or beneficiary.

Lastly, citizens’ compliance with regulations and acceptance of government legitimacy, for example, will depend on trust or confidence in government. According to Smith (2013), although “e-government applications have the potential for many positive changes (efficiency, effectiveness, transparency, and increased connectedness) that provide a multitude of pathways to build citizens’ trust in democratic institutions of government,” the supporting empirical evidence remains unclear.

Technology Barriers: The Choice Conundrum of Multiple Mediums

Beyond socioeconomic and political constraints, the type of technologies available and appropriate for use can be a limiting condition. The problem is that the diversity of available ICTs is often insufficiently understood and explored. Since the Arab Spring, many have argued that high-tech solutions including smartphones and particularly social media are critical channels for civic engagement because they reach a mass audience at low cost, provide maximum flexibility with asynchronous platforms, and provide rich interactions with visualizations and multiple parties. In parallel, however, donors and NGOs have targeted and tracked improvements in transparency, accountability, and participation through many low-cost, low-tech channels; these include community radio, loudspeaker broadcasts, narrowcasting (playing tapes at self-help or other cooperative group meetings), simple SMS-capable phones (not smartphones), and free phone calls.

A broad spectrum of methods is available in order to design for context. For example, high-technology modalities, such as the Internet or social media, have great appeal from an efficiency perspective: they can reach a mass audience rapidly and at low cost. They also provide maximum flexibility and a rich interactive experience, with visualizations and multiparty interaction, among others. However, the more advanced

the technology, the higher the level of information capabilities needed. These include traditional literacy, information literacy (how to access the information strategically), and digital literacy (how to use the ICT) to make meaning from the content (Gigler 2011). In this way, high-tech tools may be most appropriate when targeting users with greater information capabilities, or they may require support through capacity building when targeting users with lower information capabilities.

Recommendations

We conclude by offering recommendations for policy makers, practitioners, researchers, and others in the following areas: designing for effectiveness, exploring intermediaries, building an enabling ecosystem, measuring outputs and outcomes, experimenting with ICTs in non-ICT-enabled initiatives, interpreting crowdsourced data, and informing new regulations and ethics.

Designing for Inclusiveness

While early evidence showed that ICT-led transparency and accountability initiatives run the risk of exclusivity—because access to technologies is hindered by cost, connectivity, infrastructure, and the relevance and meaningful use of technology (Gigler 2011)—taking an inclusive approach to employing ICTs is increasingly possible, particularly as the costs of technology have continued to fall. In addition, we recommend designing hybrid initiatives that integrate new and “older” technologies, together with offline strategies. Cases shared in this book offer insights into how this can be achieved: for example, integrating reports from low-tech mobile phones with high-tech mapping software and offline community ICT training. For deeper use, we recommend including digital literacy programs in the architecture and operational plans of citizen engagement initiatives.

For policy makers, we recommend specifically accounting for lower-income groups by recognizing that their participation may be constrained by structural issues and a lack of opportunities to enhance their information capabilities. It is also important to recognize that data produced through crowdsourcing and interactive mapping may not be representative of all citizen information, data, and desires, masking the true needs of the most marginalized groups.

For researchers, we recommend examining the actual use, participation, and impact of citizen feedback mechanisms, participatory budgeting, and interactive mapping by poor and marginalized groups. To what extent does participation include these groups? What is the role of intermediaries acting on behalf of them?

Finally, it has been argued that transparency initiatives often benefit mainly the upper and middle classes, even though the poorer population is particularly affected by issues of corruption (Wade 2002; Knox 2009). Lower-income groups are less likely to participate in transparency and accountability initiatives, due to lack of access to ICTs, lack of confidence in using them, insecurity about making complaints, and lack of basic literacy (Madon and Sahay 2002; Wade 2002). For these reasons, intermediaries such as NGO practitioners and professionals act on behalf of poor communities, and it is important to understand the role of all stakeholders.

Exploring Intermediaries

Due to the existence of supply-side issues, as well as constrained information capabilities, the risk of selection bias arises in using ICT platforms to enable citizen feedback. Of particular concern is that younger, more educated, and mostly male citizens will participate, while more marginalized groups, including the elderly, the less literate, and women, will be excluded from the process. However, this view tends to ignore the existence of external capabilities. In developing countries, access to technology for those with lower levels of literacy is facilitated by their access to the capabilities of other members of the family or community (Basu and Foster 1998; Foster and Handy 2008). The role of these intermediaries, or “infomediaries,” in ICT-mediated feedback initiatives deserves further attention.

Consider the case of an illiterate woman living in a remote village that is covered by a cash transfer program. In the event that an ICT-based citizen engagement mechanism is incorporated into the program, the woman could report her feedback with the help of a younger or more educated family member who is technologically literate. In addition, sharing, particularly for cell phones, is very common among households as well as within communities in developing countries. At the same time, the existence of external capabilities might be limited depending on the type of technology in question, which should be taken into account when designing technology-enabled platforms for civic engagement.

Building an Enabling Ecosystem

While technologies can be used to make information transparent and inform citizens, create new spaces for citizens’ voices, connect voices to government, and enable governments to respond, a nurturing environment—people and institutions—is necessary for intended outcomes to be realized. For example, websites, wikis, and social media seem to be strongest when they are used together to run a campaign—specifically, their greatest advantage is the speed at which they gather momentum. A strong civil society caucus, civic-minded coders, and a public willing to believe that the status quo can be challenged are all inputs to a campaign that “goes viral.” To be heard and responded to, a campaign requires policy makers who are willing and able to digest the campaign, legislative bodies through which changes can be made, and judicial bodies that enforce the change. In this way, citizen engagement is about more than just using tools for participation; it is also about priming an entire ecosystem for reform by way of those technologies.

Measuring Outputs and Outcomes

Measuring the impact of citizen engagement initiatives is a daunting task, and the path to tackling it remains unclear. A case in point is the Ushahidi platform, first hailed as a success in 2008 for crowdsourced mapping of postelection violence in Kenya and then used to map Haiti after the 2010 earthquake, Japan after the 2011 earthquake and tsunami, and, most recently, the Syrian Arab Republic after the revolution. Many questions arise concerning the results of these experiments. Did the crisis mapping techniques used in 2008 succeed in creating actual impact? That is, were electorally instigated acts of violence mitigated? To

what extent did media attention contribute to these outcomes? With less media coverage on the following interventions, did the level of impact differ? Were the levels of output—crowdsourced reports—significant? Did outputs translate into reaching outcomes such as aiding in crisis response and disaster management? If goals were achieved, how did technologies specifically help to facilitate this?

Interested parties have already begun to dig for answers to these questions. “Dead Ushahidi”² notes the failures of the platform to generate anticipated usage levels in several cases. However, the ways in which this approach has produced outputs and achieved outcomes in other cases have not been measured or clearly articulated.

For practitioners, we recommend designing models fit for dynamic learning. Monitoring, documenting, and assessing should occur on an ongoing basis with the intention being to promote learning from experience. This could look like tracked outcomes paired with targeted communication plans to learn from existing successes, avoid repeating failures, and design forward-looking initiatives. A significant point of consideration is the potential inability to quantify outcomes and, hence, the difficulties involved in measurement. In these cases, it will be necessary to describe qualitative changes.

Experimenting with ICTs on Non-ICT-Enabled Initiatives

In this paper, we have discussed ways in which ICTs benefit citizen engagement mechanisms as well as their limitations in doing so. One way of determining the added value of using ICTs would be to analyze their effects on non-ICT-enabled transparency and accountability initiatives. For instance, how would the results of an *online* community scorecard or citizen report card compare to those of a traditional face-to-face one? What did Anna Hazare’s campaign against corruption in India, characterized by a Mahatma Gandhi–inspired hunger strike, look like after Facebook publicity? Many assume a straightforward answer: through social media, the campaign picked up speed and volume. Examining it from a different angle complicates this conclusion. For example, Cohen (2011) argues that Egyptian President Mubarak’s decision to shut down the Internet and mobile phone networks during protests in Tahrir Square backfired by encouraging face-to-face interaction, spreading the message to a wider demographic. Mubarak’s decision “implicated many apolitical citizens unaware of or uninterested in the unrest; it forced more face-to-face communication, i.e., more physical presence in streets; and finally it effectively decentralized the rebellion on the 28th [January] through new hybrid communication tactics, producing a quagmire much harder to control and repress than one massive gathering in Tahrir.” This analysis demonstrates the need to see the benefits of ICTs, such as hastening the process of interaction, together with the limitations, including engendering no more than armchair discussions within elite groups. One approach to unpacking this nexus is to experiment with ICTs in non-ICT models.

2. See <http://deadushahidi.tumblr.com/>.

Interpreting Crowdsourced Data

As crowdsourcing becomes an increasingly popular technique for data collection, a question about the robustness and meaning of the data arises. Namely, if individuals are self-reporting on, for example, elections, corruption, and public service delivery, are there ways to verify the validity and quality of this information? Do we need to “validate” it, and, if so, to what extent? What role do personal motivations play in the reporting process, and how does this affect outputs?

The concern with crowdsourced data is twofold but overlapping: the authenticity of individual data and the meaning of composite data. Data users, whether they are government, donors, or NGOs, seek data points that are relevant to their goals. It is difficult to determine a universal definition of relevance, but issues of user motivation and demographics are defining factors. Inappropriate intentions or mismatched demographics may call the relevance of the data into question. However, a large sample size can render this issue insignificant; for example, if hundreds of reports identify violence in a single location, verifying each data point may not be necessary or useful for taking action.

Interpretations of aggregate data are equally important. *I Paid a Bribe*, the online bribe-reporting platform in India, reveals that the heaviest traffic is from Bangalore. Is this due to the city’s disproportionately tech-savvy population, or does it suggest that Bangalore has the highest level of petty corruption? Are there other ways to interpret this information?

By decentralizing data collection, crowdsourcing has accelerated the pace at which geographically disparate pieces of information are aggregated. Going forward, the main task will be to analyze data critically and to communicate what the results mean for furthering citizen engagement and bettering government responsiveness and action.

Informing New Regulations and Ethics

As ICTs play an increasingly prominent role in shaping routes to accountable governance, there are new implications for how ICTs should be used and regulated. We encourage a debate about the responsibilities of companies that manufacture the technologies used in social movements and changes. For example, should Vodafone, a British-based company, have acquiesced to Mubarak’s telecommunications blackout? The company was criticized for later releasing a “power to you” advertising campaign, suggesting that it had been a major tool in the protests, despite having acquiesced to Mubarak’s suppression. If ICTs are used to spark a riot, revolution, or even a peaceful protest, what role should technology companies play in these events? What responsibility do they have to the end users who are making demands or even threats using these technologies? Who should be regulating these activities, and what should this regulation look like? How should the legal system operate if the technology company enabling the ICT service is based in one country, while the technology is used for various purposes in another?

Technology-driven transparency and accountability initiatives raise several ethical questions regarding issues of security and privacy. If a citizen uploads data to report human rights violations, corruption, or general public wrongdoing, are the data secure and to what extent? What are the risks to participating in these initiatives? Are steps being taken to ensure privacy and protect human rights?

Finally, what are the ethics behind policy to limit or increase the use of technologies? Opposing approaches to using technologies—one for openness in the name of democracy and prosperity and one for surveillance in the name of national security—begs the question: who decides what is “for ill” and “for good”? How and who will legislate for this in the new paradigms of citizen-government interaction?

There is an urgent need for and much to be done about developing a better understanding of the impact that technologies for transparency have on privacy, security, and human rights. Researchers should examine what constitutes a regulatory environment that nurtures civic participation without encroaching on fundamental rights to privacy. Policy makers need to direct their attention toward building a regulatory and legal framework under which citizen engagement initiatives can operate to promote transparency while also protecting security. This requires open dialogue and collaboration between governments, private technology companies, donors, and civil society organizations to define and explore the list of possibilities and boundaries. How we use technologies today—for creating openness versus restricting privacy, for engagement versus surveillance or censorship, for human rights protection versus harm—will determine the societies we live in tomorrow. The more we work to demystify the use and effects of ICTs for citizen engagement, the closer we will come to closing the accountability gap.

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