Filling a Gap in Governance
The Case of Balangay as a Useful Application of Digital Technology

Francis Isaac and Joy Aceron
G-Watch Center

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This short paper briefly looks at Balangay and how it was developed as a useful application of digital technology to address a specific governance problem of Legazpi City. It also examines the challenges that Legazpi faces in enabling strategic collective action to promote responsive and accountable governance.

In a nutshell, Balangay is a cloud-based information system that aims to provide “prompt, reliable and understandable information” regarding various natural disasters that may threaten Legazpi City, such as typhoons, flooding, landslides, earthquakes, and volcanic eruptions. It comes in the form of a web and mobile app that is meant to help prepare the City’s residents for any possible calamity.

During the summer, or during the months of March until May, Legazpi City looks deceptively peaceful. To the east lie the Bay of Albay, while on the northeast, the ground eventually rises into a slope, forming into the near-perfect cone of Mayon Volcano. With the sea lapping at its shore and with white smoke billowing from the volcano, Legazpi is undoubtedly one of the most picturesque cities in the Philippines. Yet, it is Legazpi’s scenic charms that are the reasons for its vulnerability to disasters.

In 2015, a new startup developer called IGNYTE Innovations Lab began working on a technology solution to help improve Legazpi’s disaster readiness. Composed of young professionals in their mid-twenties, the group, later renamed as Layertech, came up with Project Balangay and was given support by Making All Voices Count (MAVC).

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The Balangay system has four main features. The first is an Announcement System, which forwards disaster-related notifications from the government, such as storm signals, eruption warnings, road conditions, and class suspensions. It also provides information on disaster preparedness activities, such as drills, seminars, etc. It has Hazard Maps (H-Maps) that can be used to determine the susceptibility of one’s home (or current location) to natural calamities. All maps are based on data from the Albay Public Safety and Management Office (APSEMO).
Balangay also includes D-Learning, which has three sub-sections: (1) Disaster Dictionary, (2) Disaster Encyclopedia, and (3) Survival Kit. Disaster Dictionary contains short definitions of terms related to disaster preparedness. Disaster Encyclopedia, on the other hand, has more in-depth information on disaster related topics; while the Survival Kit contains tips on how to prepare for natural calamities. Finally, it provides Emergency Hotlines, which is a directory of schools and other agencies related to Disaster Preparedness and Response.

In addition, most of the information found in the app are written in simple Filipino so that ordinary citizens can be easily understand them. Prior to Balangay, information was relayed to Legazpi residents by APSEMO through radio and television. The information, however, were often difficult to understand since the information was in English and loaded with technical terms. By using simple everyday words, Balangay has helped improve information access in Legazpi City.

Useful Application of Technology

The Philippines has witnessed several “failed” applications of digital technology. In fact, the World Bank (2016) and Brookings Institution (2017) have recent studies pointing to the limitations and challenges of ICT-based governance initiatives. It is within this context of largely failed digital technology application that Balangay is worth noting as a rare tech-enabled initiative that works.

In a learning event held in South Africa in March 2017, MAVC introduced seven streams of tech-enabled change in the pursuit of accountable governance. These seven streams are: (1) the information stream, (2) feedback stream, (3) naming-and-shaming stream, (4) conducive innovation stream, (5) connecting citizens stream, (6) infomediation stream, and (7) intermediation stream (Brock and McGee 2017).
Following MAVC’s streams of tech-enabled change framework, Balangay was able to make use of two streams. The first is through the information stream, which allows citizens greater information regarding available government services. The second is through the informediation stream, which emphasizes the role of “tech experts” in facilitating “interfaces between governments and citizens” (Brock with McGee 2017: 4). Through their linking efforts, inaccessible government data becomes “accessible, understandable and usable for less data-literate citizens or service users, who then use it to claim entitlements” (Ibid.: 4).

As they were creating the app, Layertech soon realized that in order for Balangay to be successful, it had to be integrated into the whole context of Legazpi City by factoring in the existing infrastructure, its local culture, and the daily challenges that its people face (Balangay 2017).

**Citizen Needs, Government Vision**

From the onset, Balangay’s immediate aim was to provide timely, reliable, and easily understandable disaster-related information. This corresponded to the efforts of the city government to improve its performance in disaster risk-reduction and management (DRRM). Legazpi officials had two motivations for doing so.
First, it was the desire to earn the Seal of Good Local Governance (SGLG)—an incentive mechanism meant to encourage local governments to promote transparency, participation, and accountability. Under this program, local governments are assessed using six indicators, one of which is disaster preparedness. Cities, such as Legazpi, that are awarded the Seal are given a Php 3 million ($60,000)-subsidy by the national government, which they are supposed to use to fund local development projects.

Second, businesses were reluctant to invest in Legazpi City not only because it was prone to typhoons, but also because of its proximity to the Mayon Volcano. To boost investor confidence, the city government needed to have an information system that would allow both citizens and local officials to address any disaster.

Balangay was also in line with the vision of the local administration to turn Legazpi into a smart city, with ICT being used to improve the performance and services that the city government offers.

At the same time, the app was able to address a felt need among Legazpi residents for disaster-related information that are timely, accurate, and easily understandable. To identify the kind of information that the public found useful, research was undertaken during the initial phase of the project. Interviews were conducted in six vulnerable barangays (villages) to determine the type of technology that residents were using and the most appropriate language to be used in the app.

Because it was able to address both the needs of ordinary citizens and the strategic direction of the local government, Balangay was easily incorporated as part of the overall disaster program of Legazpi City. In doing so, the app smoothly evolved into becoming a part of a broader tech application of the city to address other information gaps in terms of reporting, feedback generation, and database development. It also guarantees that Balangay would continue even after funding support from foreign donors have finally ceased.
Enabling Factors: Tech developer + open LGU + active CSO

The use of ICT in the Philippines funded by donors in the recent past has been, by and large, unsuccessful. The top-down process, where funding incentive from the top, drives the action may explain this. The use of ICT was encouraged (or imposed using the incentive of money) from the top without first understanding how and when it will work in a given context. As a result, citizen use and government response to ICT-enabled initiatives in the Philippines was largely dismal.

The development of Balangay, on the other hand, proves to be bottom-up and local-based, addressing a felt-need of citizens and local government.
Not many digital tech solutions in governance have proven to be useful, but there are three factors that enabled this case’s application of digital technology to work: (1) The competence and attitude of the technology developers, (2) The openness of city officials, and (3) The active involvement of civil society and the business community.

The Tech Developer

Through an open call for application to an innovation competition, MAVC was able to engage an “unusual” suspect, a start-up app developer based in Legaspi, a city in Southern Luzon Philippines. IGNYTE (now Layertech) is headed by a young information technology professional, Frei Sangil.

Before heading IGNYTE/ Layertech, Sangil joined the 2013 Global Innovation Competition in Hong Kong, which expanded her exposure to the world of digital technology. She initiated IGNYTE’s participation in MAVC in recognition of a problem she herself has experienced growing up in a typhoon-prone locality. Since Sangil was also from Legazpi, she had a good grounding of the problem, and was aware of the broader social context that she and her team had to navigate. Realizing through her early exposure in the IT industry that a lot of technology application failed because they do not put people at the heart of technology, the Balangay project team purposely integrated the opinions of the intended users at the onset of the project. Using surveys and face-to-face interviews, the developers were able to identify the real-life concerns of Legazpi residents and the type of technology that could best address those challenges.

IGNYTE/ Layertech, mainly through Sangil, navigated the difficult terrain of local governance with a collaborative attitude. It worked with concerned offices of the LGU, tapped relevant civil society groups, mobilized volunteers among the youth, and immersed in the community as much as they can. IGNYTE/ Layertech ensured that there was proactive community engagement to get the people to use the technology. With the help of volunteers who strived to engage
active citizens, such outreach activities were made fun and easy to understand. The fact that the language used by the app is Filipino shows the centrality of the people and their need in Balangay.

Openness of the Local Government

While they were reaching out to the communities, the project team was also courting the support of the local government. For this purpose, Balangay was framed as a tech solution that would help boost investor confidence. The developers did so knowing that the app had to be integrated in the city’s government’s operations if it was to be sustained.

Fortunately, Legazpi mayor Noel Rosal was supportive of the initiative from the onset, sensing that it was aligned with his vision of turning Legazpi into a smart city. The mayor has been known for being open and responsive to innovation and citizen demand. (FGD Notes, 21 August 2017). This made it easy for Balangay to get the support of the Sanggunian (City Council) and other key personnel of the city, such as the the city administrator, the planning coordinator, and the to-be-formed Disaster Risk Management Office (DRMO).

Such attitude of the leadership key in enabling Balangay was not only in account of the personal qualities of the mayor, which is often the reason given whenever there are ‘good’ government officials. There are other factors why the mayor behave the way he is towards an initiative of the private sector/ civil society. One factor that came out in the FGD was the fact that he has political
The enthusiasm of some of Legazpi’s local officials towards Balangay is matched by the active involvement of the civil society and the business community. In fact, Balangay was fully endorsed by both the Albay Chamber of Commerce and the Albay ICT Association. These two local business groups argued that, with the app in place, entrepreneurs will feel safe and would eventually invest in Legazpi. It would also attract more tourists who would bring in more money to the City.

Civil Society Engagement

The relative openness of local officials to the technology can be argued as product of active civil society in Legazpi. Legazpi has had a long history of collective action being one of the strongest bases of social movements in the past. This makes it unsurprising that the private sector and civil society were pivotal in the introduction, development, and implementation of Balangay as an innovation (FGD Notes, 21 August 2017).

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This push from Legazpi’s business community was also complemented by the action of civil society groups. The project team, for example, was able to link up with youth groups and cosplay associations, such as the Legazpi Anime and Manga Buffs (LAMB) to reach out to the communities. Along with these organizations, the developers organized “fun-filled” information campaigns in selected schools and in the six target barangays. In addition, Balangay also received endorsement from several learning institutions, such as Bicol University, STI College and the Southern Luzon Technological College (SLTC).
The City’s planning coordinator, Joseph Esplana, admitted that the involvement of civil society groups was important in convincing ordinary citizens that Balangay has no partisan agenda and that it will not be used for election purposes. This makes civil society role in this initiative crucial. “Citizens view anything new that government introduces with suspect.” This is an observation agreed upon by the participants of the FGD, who noted people have a natural distrust towards government, and that they are more inclined to trust CSOs.

Challenge: Will it Enable Broad and Sustained Citizen Collective Action?

While Balangay has proven to be useful in filling a gap existing in disaster management of Legaspi City, it is still to be seen whether Legazpi’s DRRM capacity has been improved. Since control over the app was formally turned over to the local government, the City has not been hit by any major calamity. Such a situation would have put Balangay’s effectiveness in coordinating disaster preparation and response to the test.

And though the app is able to address a felt need among citizens, its actual usage remains largely limited to college and high school students. Sangil, in fact, admits that the app is seldom downloaded by those from the pre-millennial age bracket. One possible explanation is still-limited scale of their public information campaign. Aside from the six pilot barangays, the developers have only visited a number of selected schools. Though recently, Sangil’s group has launched Balangay in all the barangays, there has yet to be a massive public information dissemination drive that uses mainstream media, such as radio and television.

The decision to target the youth has been deliberate since the developers view them as “information leaders.” But according to Rhea Celzo, a Balangay user, the app has not been

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massively downloaded by her peers and fellow students. The reason that she gave was both insightful and revealing: Balangay is a governance issue for her generation: “governance is “adulting” and is not part of their primary concerns. To possibly reach out to more youth, Celzo suggests that the app be made more interactive (such as incorporating games) in order to make it more attractive to the younger generation.

Apart from getting more traction from the youth, another challenge for Balangay is how to expand its usage among the rest of the population. Disaster response in the Philippines has always involved community and family action. Filipinos prepare and respond to disasters as communities and families, while digital technology application tends to individualize action with how it is designed targeting individuals and individualized use.

Given the foregoing limitations, it remains to be seen if Balangay can support and enhance collective action, what is viewed as strategic use of technology in governance. According to Brendan Halloran, digital responsive governance if it is used “with a sound understanding of the accountability ecosystem” (IDS 2016: 27). Such assertion assumes that while “an ICT short-cut does not exist,” technology can nonetheless be used to “strengthen civic capacity, including collective organisation, building relationships and trust, and acting in flexible and adaptive ways according to shifting contextual opportunities and constraints” (Ibid: 27).

Similarly, Tiago Peixoto and Jonathan Fox argue that digital technology “can encourage service providers to become more publicly accountable” if it is used to enable collective civic action (2016: 23). In situations wherein government authorities seem unresponsive, for example, “ICT platforms can bolster downwards accountability by enabling the collective action needed to give citizen voice some bite” (Ibid.: 36).

If Balangay can be integrated in how communities and families prepare for and respond to disasters, then perhaps it can better support collective action of citizens ensuring sustained attention and efforts on disaster management. One possible direction is for the app to be integrated with other forms of media, including television and radio. By doing so, Balangay will be part of a wider information delivery system covering a larger number of people, thereby potentially providing the needed feedback and push to ensure that the government remains responsive and accountable on the issue of disaster management.
References


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Focus Group Discussion

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Photos from [www.layertechlab.com](http://www.layertechlab.com)
About the authors

FRANCIS ISAAC is Government Watch (G-Watch) Executive Board Member, handling its Research and Knowledge Management.

JOY ACERON is Convenor-Director of G-Watch and a Research Fellow of Accountability Research Center (ARC) based in the School of International Service of the American University in Washington, DC.

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G-Watch is an independent national action-research organization embedded in a constituency of advocacy and civic organizations all over the Philippines that aim to contribute to the deepening of democracy through citizen empowerment and the scaling of accountability.

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