Independent Evaluation of the Ushahidi Haiti Project

Executive Summary of Preliminary Findings

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The Ushahidi Haiti Project (UHP) was a volunteer-driven effort to produce a crisis map after the January 12, 2010 earthquake in Haiti. The project represents an impressive proof of concept for the application of crisis mapping and crowdsourcing to large scale catastrophes and a novel approach to the rapidly evolving field of crisis informatics. This evaluation was commissioned by the student group at the Tufts University Fletcher School who instrumental in the UHP deployment and is intended to be a *learning evaluation* as opposed to an *accountability evaluation*. The evaluation's purpose is to serve the needs of UHP users and was structured around the Organization of Economic Development's (OECD) criteria: relevance, effectiveness, efficiency, impact and sustainability. The evaluation team utilized a mixed methods approach combining surveys of key user and volunteer groups, 30 interviews with core UHP volunteer staff and stakeholders, document review/data analysis primarily focused on UHP message data, volunteer chat forums, coordination chat history and key news sources/blogs. The findings here are preliminary as some key groups (particularly the diaspora volunteer base) are still being surveyed. A final report will be released in February 2011.

Relevance

To what extent does UHP address unmet needs of beneficiaries, humanitarians and the donor system which supports it?

Looking at the relevance of a project gets at the heart of whether or not it was a good idea from the start. The enormous appeal of the UHP in the media and among stakeholders can be largely attributed to its profound relevance in early response to emergencies. The UHP addressed key information gaps (1) in the very early period of the response during the first days and weeks post-quake before UN and other large organizations were operational, (2) by providing situational awareness and critical early information with a relatively high degree of geographic precision, (3) by providing situational information for smaller NGOs that did not have a field presence in Haiti, (4) by helping smaller, privately funded responses to more appropriately target needs and, (5) by facilitating private citizen actors. The UHP also was relevant in the sense that it directly engaged affected Haitians and the Haitian Diaspora in the articulation of need and the organization of local capacity for response. Vigilant attention to broad concerns related to the protection of participants and vulnerable individuals is key to maintaining and improving relevance to the willing participants in open, social crisis mapping systems such as UHP.

Effectiveness

To what extent did responders actually make decisions based upon UHP and the information it provided?

The question of information use is central to the evaluation of information interventions. However, the linkage between information and response in general is typically tenuous at best, and the evaluators were not surprised that findings regarding such linkages were mixed.

Perhaps the most common use of information aggregated by UHP was for situational awareness. The Department of State analysts for the USG interagency task force used Ushahidi in at least one case to help triangulate conclusions about the situation on the ground, and US military organizations used Ushahidi data feeds along with other sources in a similar manner to inform their early situational assessments. There is also some evidence of the information being used for specific operational and tactical actions targeting specific communities (and to a much lesser extent, individuals). US marines used the information to identify "centers of gravity" for deployment of field teams to areas of need, for example. Likewise, small privately-funded nonprofits without prior field presence in Haiti used the information to identify institutions such as orphanages or hospitals as possible partners. For example, the organization NYC Medics were able to identify the Albert Schweizer Hosptial as an institution with capacity to use the doctors and supplies that the organization was able to mobilize. There is also evidence that the volunteer geo-location services offered by the UHP core team were useful for SAR efforts, for example through the resourceful geo-coding efforts of Anna Schultz at Tufts, among others. This team and its volunteer leadership, like Patrick Meier, were also effective in recognizing and catalyzing linkages and collaborations with other key systems and networks such as Mission 4636, Crowdflower, and OpenStreetMap which collectively added tremendous value to the overall stream of crisis information.

There is less evidence in the data sources reviewed by evaluators that the UHP web application itself was used extensively for soliciting additional information and feedback on individual reports, or status tracking and the monitoring of individual incidents over time, though this was indeed happening through volunteer efforts to some extent.

Why was the information used?

The UHP information was used primarily because it was the only map aggregator of information coming from the affected area during the early days after the quake. Again, this is a testament to the high degree of relevance of the UHP project. The credibility of the project and project team was often cited as a reason for the continued use of the information, and high levels of trust built through common graduate academic programs and pre-existing professional networks such as the International Network of Crisis Mappers cannot be underestimated.

Why was the information NOT used?

Barriers to use of the UHP were often significant, if also largely unsurprising. Primary among these barriers was a general inconsistency of the dynamic "event data" aggregated and syndicated by UHP with the specific and often relatively rigid information requirements of traditional responding organizations which typically require certain types of information at certain times and organized around certain response sectors and geographies. The UHP team indeed made efforts to adapt to these requirements but it is still cited as a significant obstacle to use throughout the early response. Information overload remains an issue in general for these responders.

Use was also limited due to apparent low awareness of the project within the humanitarian community in Haiti, along with low knowledge of and capacity to use the crowdsourced information. While a clear strength of the UHP was its healthy cooperative relationship with other crisis informatics initiatives like Mission 4636, it is likely that this may have also obscured a distinct UHP "corporate identity," and thereby negatively impacted awareness among groups of potential users initially less familiar with Ushahidi. Interviews also revealed some general "suspicion of the crowd" and related questions about the representativeness and quality of the data.

Finally, there were several technological limitations to information use. USG staff cited outdated computers, browsers as well as internet communication security policy as significant obstacles to accessing the UHP website and data streams. Limited bandwidth was cited by organizations on the ground in Haiti.

Efficiency

How efficiently did UHP add value through the processing and mapping of reports?

Upwards of 40,000 reports were processed through UHP/Mission 4636, and 3,584 events have been mapped in Haiti. Of these, 80% were mapped in the first month and 72% of all points were mapped in Greater PaP.

UHP leveraged some tremendously efficient crowdsourcing strategies to produce a translated and geo-coded stream of data, namely the crowdsourced mapping of Haiti using the OpenStreetMap and the crowdsourced translation of Mission 4636 text messages eventually accomplished with the support of CrowdFlower. The translation and geo-coding of messages in preparation for reporting in and of itself was fast, though there is evidence that there were occasional delays between steps in the system and the ultimate mapping of reports. Often the message detail was not sufficient to correspond to specific relief planning needs related to the number of people in need and their location. Duplicate messages indicated some technical or systemic problems that were not corrected by quality assurance efforts. At certain phases, uneven capacity of volunteers and insufficient efforts to build consistent capacity or implement more rigorous quality assurance also negatively impacted the value of classification and in some cases the accuracy of locations. Although

there were some concerns expressed by both volunteers and potential users about the accuracy of geo-coding, the majority of incident reports did not require search and rescue action and therefore high accuracy and precision was actually less critical. Additional consideration of appropriate geographical aggregation for different types of reports may have improved the usefulness of information from UHP.

Efforts in the area of categorization and sub-categorization did not represent significant value added. This was partly a result of the classification scheme and also sometimes due to a significant rate of mis-classification in some categories (as high as 47%). A surprising finding was that volunteers sometimes intentionally misclassified general distress messages as a request for food or water because of a concern that messages not associated with a specific classified need might be ignored. Lack of clear criteria and robust classes contributed to these types of misclassifications.

Impact

To what extent did UHP benefit people affected by the earthquake?

It must be noted that this is the most difficult aspect of the UHP to assess and this section of the evaluation is supported with the weakest evidence base. It was abundantly clear in the interviews that stakeholders strongly believe lives were saved as a result of UHP. For instance, many of those interviewed offered the case of the rescue of a trapped UN worker. The evaluation team is in the process of assembling anecdotal and other evidence of impact from interviews, chat transcripts, news and site comment history. The team is also conducting a broader survey of the Haitian Diaspora and the Mission 4636 volunteer community as it is clear that many in this group were in direct personal contact with quake survivors and that their individual actions may frequently have had a clear and significant impact. These details will be included in the final report. If you have any information or stories you would like to share, please contact the evaluation team.

Sustainability

To what extent has the UHP created a group of international crisis mappers?

At an international level, the UHP experience has propelled crisis mapping and the International Network of Crisis Mappers to a larger response community and has resulted in dramatic growth in the crisis mapping community. Furthermore, evidence of sustainability can also be found in the deployment of similar but improved crisis mapping activities in more recent disasters such as the quake in Chile and floods in Pakistan later in 2010. The sustainability of the crisis mapping community is also enhanced by the strong links that Ushahidi and the crisis mappers have established with academia, and it should also be noted that a Standby Volunteer Task Force was launched at the International Conference on Crisis mapping (ICCM) 2010 precisely to aid in sustainability and preparedness.

To what extent has UHP been institutionalized in Haiti?

In Haiti, the UHP has made a great effort to transition the work they started, and continue to be a resource to the emergency response community there. A Haitian partner, Solutions, was identified to take over the website including overall management of the call/SMS center function, and a microtasking NGO called Samasource that focuses on providing jobs in poor and disaster-affected communities through microtasking continues to support the project from a center near PaP. Additionally, several UHP volunteers are now working in different capacities in Haiti.

To what extent has UHP stimulated commitment from donors and influential actors?

UHP's impact on donor/influential actor commitment was substantial, as indicated in press releases as well as continued engagement of the UHP team. For example, interviews with several respondents working with the military attribute UHP as being critical for the breakthrough in executive level demand for crowdsourced data, crisis mapping and the creative engagement of mobile and social media.

Highlighted Recommendations

Following is a selection of key recommendations from the larger evaluation report. It should be noted that some of the recommendations—in particular those related to training and preparedness of volunteers and academic institutions--have begun to be addressed through the recent establishment of the Standby Volunteer Task Force at ICCM 2010 and the Universities for Ushahidi Initiative.

- Seek crisis mapping champions among UN, NGO and influential responding organizations. Target capacity building opportunities at these institutions. Pay special attention to coalitions of small and medium-sized NGOs that may benefit most from these UHP-style approaches. Consider intentional outreach to community-based and faith-based organizations that tend to have long-standing relationships with vulnerable populations and effective communication networks at local level.

- Strengthen connection with Academia, particularly for university-based deployments of Ushahidi. Get faculty involved in the recruiting, training, and develop a Certificate in Crisis Mapping.

- Engage more closely with the UN Cluster Information management group and CDAC, potentially taking a survey approach to shaping the characteristics (metadata, format, type, visualization) of data aggregation, classification, mapping and visualization.

- Develop capacity building tools for volunteer and community-based organizations, as well as citizen responders, including sensitization to issues such as protection. For capacity building, consider partnering with small firms already working in developing countries or vulnerable places that have experience consulting for the international community and government using GIS and mapping for development or recovery activities.

- Strengthen ties to CDAC and emphasize early identification of respected authorities and communications channels to improve reporting frequency (by responders). Ensure that reporting channels are unambiguous and clear in purpose and use.

- Identify institutional partners for geo-location reach-back for SAR and also for reliable case management of urgent reports such as "trapped people" or "medical emergencies"

- Improve information utility by increasing the diversity and sophistication of intelligent summary tools and syndication options.

- Implement more rigorous quality assurance techniques to monitor accuracy of classifications and geo-location in near real-time. This should include the continuous improvement of capacity building materials, standards, and volunteer competency.

- Continue to strengthen tools for incident tracking/monitoring, potentially leveraging existing major social networks and communication tools to rapidly jumpstart collaboration in this area following a disaster event.