

Measuring Impact of Local Community Initiatives: A Crowdsourcing Approach

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Abstract

Over the last decade, a number of initiatives have been investigating the application of information technologies to increase civic engagement in local communities. An important challenge faced by many of these initiatives is discovering ways to reliably measure their impact. We propose a panel during the Citizen+X workshop to promote discussion on engaging the crowd as sensors of impact for these local initiatives.

Introduction

Civic engagement in local communities plays an important role in health, safety, and prosperity of residents of the community. A number of initiatives are constantly launched for community development. Non-profits organize events and programs that create spaces for residents to meet each other to encourage cooperation for achieving common goals in the community, such as economic development or individual empowerment. At times, residents try to use these initiatives to mobilize and organize groups to defend their public spaces or prevent crime. City governments are now getting involved in open data initiatives in order to increase transparency and encourage citizens to get involved in community political issues. Technology practitioners create software to facilitate communication among residents and/or with their governments in order to achieve similar goals. However, many of these attempts struggle to measure their impact for the community and in return their sustainability over time is constantly in risk. In this panel, we aim to create a space to discuss how crowdsourcing can become a feasible mechanism to collect and integrate data that can be used to measure this kind of local initiatives for community development. Two main case studies are proposed as the main focus of discussion:

hyper-local online systems and local small-scale non-profits.

With the prevalence growth of the Web and online communities, researchers and practitioners have been investing into online solutions to face challenges of local communities, such as finding locally-relevant information, encouraging civic engagement, or providing support in time of crisis. Over the last decade, there have been many attempts to create online local systems, recently referred as hyper-local online systems, to bridge the online world with the physical local spaces. They pursue various goals such as providing hyperlocal maps for a specific locale to provide support for walking, hiking, or biking tours (e.g. Cyclopath¹); aggregating and disseminating hyperlocal news and events (e.g. Whoo.ly², and CityBeat³); supporting social networking and community building among local residents (e.g. NextDoor⁴, Neighbortree⁵); encouraging local activism and civic participation (e.g. E-Democracy⁶, Neighborland⁷); creating a marketplace for local residents to exchange tangible or intangible goods (e.g. Uniiiverse⁸) and aggregating big data to model the dynamics of a city (e.g. Livehoods⁹). The hyper-local online systems can play important roles in urban and local developments; however, they often struggle with the challenge of discovering ways to accurately and comprehensively measure their impact in the local communities.

Traditionally, online communities have relied on traces of online activities as measures of success or failure; however, the hybrid nature of hyper-local online systems introduces new challenges in discovering measures predicting

¹ <http://cyclopath.org/>

² <http://whooly.net/>

³ <http://bit.ly/citybeatwww14>

⁴ <https://nextdoor.com/>

⁵ <http://www.neighbortree.com/>

⁶ <http://forums.e-democracy.org/>

⁷ <https://neighborland.com/>

⁸ <https://www.uniiiverse.com/home>

⁹ <http://livehoods.org/>

the impact of these systems. Members of hyper-local online systems share a geographical local context and have the ability to plan offline meetings or even run into each other by accident. The online-offline nature of the interactions among members of hyperlocal online systems can challenge the predictive power of measures suggested by prior research in the field of online communities. In hyper-local online systems that often aim to increase offline participation, receiving online responses does not always indicate the positive outcome one expects. At the same time, responding online is not the only way for members to make their support evident. In hyper-local online communities, online traces provide an incomplete picture of members' actions and as a result an incomplete picture of the impact of these systems for local communities.

Measuring impact and performance have long been identified as an important activity for many non-profit organizations focusing on community development. It has been advocated as a means of eliciting better accountability and more effective program evaluation. Outcome measurement can be used as a tool for learning and providing feedback to nonprofit organizations, leading to formulation of new strategies. It benefits nonprofit organizations by providing feedback and direction, pointing to issues in organization, identifying patterns, allocating resources, attracting customers, setting targets/goals for the future, and increasing funding. Similarly, non-profit organizations have been struggling with discovering ways to more systematically measure and report their impact, beyond conducting self-selected subjective survey responses.

In face of these new challenges, we believe it is important to discover new processes to be employed by local initiatives such as hyper-local online systems and non-profits to measure and track their impact. We propose to engage the crowd as sensors of impact for these local initiatives. Crowdsourcing projects often make use of the crowd as sensors to collect scientific data such as observing birds in the backyard¹⁰ or counting bees as pollinators sitting on sunflowers in individuals' garden¹¹. In this panel, we would like to discuss ways to engage and incentivize the crowd to provide feedback to the local community initiatives which can be used as predictive measures of impact. For example, for a hyper-local online system that focuses on enabling its members to organize offline events, it can be beneficial if everyone who attends the event will provide feedback in the online system to bridge the gap between the online and offline world, or if the organizers of the offline events will have a method to provide feedback to the online system about their offline experience with the event.

Discussion prompts

Given the current interest in technology for geographical communities and non-profit organizations, we believe that this is an important and timely topic to be discussed among scholars in the field of human computer interaction. We propose a short panel session during the Citizen+X workshop to promote discussion around the following questions:

1. Can crowd be used as sensors of measuring impact in the local community initiatives?
2. What are the methods to incentivize citizens to provide this kind of feedback? Can gamification approaches be used to encourage providing feedback?
3. Can we re-use crowdsourcing approaches to encourage crowd participation as sensors of impact?
4. How can we take advantage of offline context to encourage crowdsourcing?
5. How to encourage more crowd participation online that does not come with the price of less offline participation?

We have attempted to put together a team with diverse background in this field, including researchers in the field of online communities and citizen science, and a practitioner of a hyper-local online community. We anticipate the topic of the panel will be highly relevant to the workshop and we hope to promote passionate discussion during the panel among participants of Citizen+X workshop who will add valuable diverse expertise to the discussion.

¹⁰ <http://ebird.org/content/ebird/>

¹¹ <https://www.greatsunflower.org/>