PARTICIPATION BY DESIGN: A BLOG SERIES

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INTRO Participation by Design: A Blog Series

*Jacob Smith edited the "Participation by Design" series in his role as the director of the PlaceMatters Institute. The PlaceMatters Institute, a project of the national non-profit PlaceMatters, serves as a hub of cutting edge strategies for helping communities make informed, transparent, and better decisions. Jacob is the former mayor of Golden, Colorado and the co-author of **The Nimble Nonprofit: An Unconventional Guide to Sustaining and Growing Your Nonprofit.***

Today we are kicking off our "Participation by Design" blog series, highlighting examples of strategies, approaches, and tools to effectively designing for participation. Our focus is on community decision-making, and you'll see a lot of examples tied to communities making decisions on issues like transportation and land use. But we are also reaching out to folks in other fields who face similar challenges – museum exhibit design, architecture, and others – designing experiences and processes to be genuinely participatory.

Our goals: highlight a diverse array of amazingly cool engagement and participation approaches, and draw attention to some of the many folks who are actually doing all of these cool things.

Starting tomorrow, and lasting about a month, watch the PlaceMatters blog for great examples of designing for participation and engagement.

And if you have any suggestions for folks we should invite to contribute, or specific strategies, approaches, or tools that we should highlight, please let us know.

Just one example of the huge array of very cool participation design approaches: chips, legos, and blocks can be used in ways that promote shared learning and creative, collaborative problem-solving.

#1 Twitter-government…Can Micro-Participation Stimulate Public Engagement?

This post was contributed by Jennifer Evans-Cowley, PhD, AICP. Jennifer is the Associate Dean for Academic Affairs and Administration for the College of Engineering and a Professor of City and Regional Planning at The Ohio State University.

Back in 2009, Texas Citizen Fund invited me to serve as an external evaluator on a Federal Transit Administration proposal. Their goal: to try to use social media to engage the public in planning. At first I thought okay, everyone is trying this, what are you doing that's new? We have all seen the build the social media presence and wait for people to come approach. We've also seen the build the social media presence and push out information approach. There is nothing wrong with these approaches, but they have generally had limited success.

I was pleasantly surprised that their approach did indeed represent an innovative approach to engagement. Their innovation was simple in concept. Build a system that would constantly scan Twitter, Facebook, and blogs looking for anyone posting about transportation issues in Austin. Once they found someone already talking about transportation they would simply insert themselves into the conversation in an attempt to engage the social media users in dialogue around key topics in the Austin Strategic Mobility Plan. From this idea SNAPPatx was born.

SNAPPatx deployed a lot of technology to integrate a website, blog, Facebook, and Twitter using web-base analytics and database. Between April and October of 2010, they collected almost 50,000 microblogs. I compared how the SNAPPatx project compared to other social media projects cited in the academic literature, a few key successes:

- SNAPPatx generated a following on Twitter greater than 98 percent of other Twitter users

- SNAPPatx achieved greater equality of participation among users than found in other studies
- SNAPPatx had an average of 45 microblogs retweeted per week. Based on previous research, retweets are forwarded continuously to reach an average of 1,000 users. Meaning that SNAPPatx was potentially reaching 45,000 people per week.

The most important part of the project is the direct engagement between SNAPPatx and the microbloggers. The extension of the simple microblog into a dialogue is termed micro-participation. One of the keys of using micro-participation in this context is to be concise and to understand all of the lingo to efficiently and effectively communicate via Twitter and other social media sites.

Austin's unofficial slogan, Keep Austin Weird, is imbedded into the culture of the city and comes through in what people are microblogging about. For example, in this micro-participation dialogue SNAPPatx got to have a little fun talking about the locally famous biker who only wears a g-string while riding his bike.

> @elizmccracken When I was there I saw a guy with a ZZ Top beard pulling a standup bass on a trailer behind his bike. Austin=weird biking.

> @leahcstewart @elizmccracken Do the weird Austin bikers make you want to ride a bike yourself or are you just happy to observe? #snappatx

> @SNAPPatx @elizmccracken It depends on whether I have to ride the bike in a g-string toting a standup bass.

> @leahcstewart @elizmccracken Nope, you can ride the bike in any manner you choose – no g-string or instrument hauling required. #snappatx

While the above dialogue is fun others were much more specific to discussing critical issues related to the City's transportation planning effort. In the following dialogue, SNAPP was able to educate and receive input on potential solutions. The microblogger starts by telling a fellow microblogger his or her thoughts about Austin and SNAPP provides information about urban rail.

> @gary_hustwit Austin. Good: nice public outdoor spaces. Bad: Very car dependent, no urban light rail. #Urbanized

@compactrobot Urban rail is an item on the 2012 transport bond so keep an eye out. How else would you improve Austin mobility? #snappatx

@SNAPPatx reduce the need for mobility to begin with. More VMU. Lessen the grip of NAs.

@SNAPPatx oh yeah, also nuke I-35 from space.

@compactrobot Well, that might create a different sort of traffic jam… Where are your worst I-35 trouble spots? #snappatx

@SNAPPatx I avoid it, frankly. I just don't like the way it's sliced downtown in half and isolated the east side from the city.

@SNAPPatx it's great for trucking companies and horrible for Austin residents. and it's a giant eyesore.

@compactrobot All fair points. Do you successfully take local routes to avoid I-35? Do you feel similar ire toward Mopac too? #snappatx

@SNAPPatx I only take 35 if I'm eating on the east side, & only after rush hour. otherwise I'll use airport, Lamar, or Guadalupe & cut over

@SNAPPatx Mopac's not as bad. but then I don't have to use it to daily to go to/from work.

The conversations are professional, but they also find ways to connect with microbloggers and encourage participation. These dialogues demonstrate that it is possible to use micro-participation to generate public input on planning issues, with SNAPPatx collecting close to 50,000 microblogs. How can all of these microblogs be aggregated to create meaning that can be used in decision-making. This was a major challenge of this project: finding ways to present results that public officials could understand and that could influence decision making.

Participation via social media requires different expectations from planners and decision makers.

Current planners and decision makers want to ask and get answers to specific questions when they need the answers. They also want to know who is giving the answers and how representative they are of the larger "public." Social media doesn't work that way. Individuals generate the comments drawing from what is on their mind and anyone viewing these comments only sees an avatar as the author. Yet, social media is generating useful data. City officials responded most favorably to the use of sentiment analysis. SNAPPatx coded each of the relevant microblogs as to whether it expressed positive or negative sentiment. After the project, I experimented with more extensive sentiment analysis that looks at sentiment profiles, such as anxiety, anger and leisure. The sentiment analysis demonstrated that it is possible to aggregate microblogs to create meaning. To learn more about sentiment analysis and how it can be used, see this article.

As a simple example, by aggregating all of the microblogs based on the mode of transportation and looking at positive and negative sentiment we find that cars and buses have an equal portion of positive and negative microblogs, while microbloggers are largely expressing positive sentiment when writing about bicycles. This provides planners and policy makers with a simple snapshot of whether the public is expressing positive or negative sentiment about a planning topic.

Sentiment analysis can be used to create understanding among a large dataset of microblogs. Sentiment analysis can be used to create understanding among a large dataset of microblogs.

The true promise of micro-participation is that it provides an opportunity to get nearly real-time tracking of public input, as demonstrated by SNAPPatx. Yet, planners and policy makers will need to work together to continue to better understand how to analyze and present the results of micro-participation in order to significantly influence decision-making.

#2 Planning for Transit-Oriented Development with 3D Visualizations

This post was contributed by Rob Goodspeed, a PhD student at the M.I.T. Department of Urban Studies and Planning with the Urban Information Systems program group and part-time research analyst at the Boston Metropolitan Area Planning Council.

Recent expansions of public transportation systems across the country mean many communities are planning for new stations. Done successfully, orchestrating changes to zoning and public infrastructure can result in lively transit oriented development that produces amenities, affordable housing, and economic development for their communities. Poor planning can result in unsightly stations, vast parking lots, and missed opportunities.

An innovative planning process in Medford and Somerville completed last year demonstrated the power of new tools to facilitate an informed discussion, such as keypad polling, 3D modeling, and interactive workshops. The process utilized a broad outreach strategy featuring a variety of traditional and new outreach methods including city and community mailing lists, outreach to local television and print media, social media, and community meetings.

The Green Line Extension is a planned extension of an existing subway line in Boston that would result in new transit stations in Somerville and Medford. Although questions about financing remain, the major engineering and design of the extension is largely complete. The prospect of new transit stations has raised concerns about the challenges — and opportunities — it will create for the neighborhoods it will serve.

Although the current phase is planned to end at College Avenue in Medford, there is continued interest to extend the service to Mystic Valley Parkway. MassDOT contracted with the Metropolitan Area Planning Council to conduct a community visioning process for this potential new station. (Disclaimer: I work for MAPC but was not involved in this project directly).

Through several public workshops, community members explored topics of opportunity and concern and provided MAPC staff with ideas about what they would like to see developed in the station area. MAPC staff used this community input to develop alternative visions for four focus areas around the station. A model was developed in CommunityViz containing 3D models along with benefit and impact assumptions for each alternative.

At a workshop held on June 23, 2011, participants worked together in small groups to discuss the various options for each of the four areas while providing feedback to MAPC staff about what they liked and did not like. The model also generated indicators for each scenario choice such as housing units, office square footage, job creation, tax revenue, etc. Participants were able to see how their choices affected the indicators and were then able to weigh choices based on what was more important to them. The power of the CommunityViz software was in its ability to generate discussions around the table amongst community members about the perceived versus actual benefits and impacts of land use and development decisions.

The process resulted in a vision for the station area that emphasizes neighborhood connections and housing, jobs, and tax revenues from new mixed-use development.

Learn more about the project and review meeting materials on the MAPC website or the MassDOT website.

Participants worked in small groups to explore potential outcomes of various scenarios. Here they are using CommunityViz to compare alternatives.

#3 Why Collaborative Development Works in a Proprietary World

This post was contributed by Jeffrey Warren, the creator of GrassrootsMapping.org and co-founder and Research Director for the Public Laboratory for Open Technology and Science.

Public Laboratory is made up of a diverse group of contributors, some working from their homes or garages, some from their workplaces or even university labs. What brings us together is the idea that open-source, collaborative development can result in inexpensive and accessible environmental sensing.

But to many, the way our community operates can be disorienting. We've approached these unique challenges in several ways.

Most people are familiar with collaborative development of textual works, such as co-authorship, or even mass co-authorship in projects such as Wikipedia. Software development is textual as well, and such communities are made possible by carefully tailored open-source licenses, which effectively stop any individual or organization from controlling the whole project.

By contributing to these works — say, an open-source web browser or an article on gumdrops — authors are assured attribution but cannot stop others from building upon their work, improving or adapting it for new uses. This works in part because each time programmers or Wikipedians contribute, their name is explicitly entered in a registry of sorts. By publishing their contributions, they give up a certain amount of control — of course, they'd almost certainly built upon the prior contributions of others who made the same choice.

Now imagine applying that system to non-textual works, such as a new kind of camera or a tool for detecting air pollution. The way Public Laboratory works, these designs are developed, tested and improved slowly through dozens of meet-ups, workshops, field events, and brainstorming sessions. At each meeting, participants agree to share their contributions in an open-source manner — but there is typically no explicit record of every contribution.

To compound this, journalists (not to mention partners and even funders) prefer hierarchical organizations so they can say things like "developed at MIT," and they really love citing individuals, not nebulous groups of

"contributors." We've often had to insist on group attribution in the media, and developing a so-called "attribution infrastructure" is a major focus on our website.

We recently launched a small set of new features on our website, PublicLaboratory.org, to address these challenges. While many people make use of our tools, as a community we'd like to highlight those who contribute improvements and share their knowledge with others. With that in mind, we've come up with some ways to track when Public Laboratory contributors actually post about their work on the PLOTS website.

Taking a cue from socially oriented open-source website Github.com, we've posted small graphs of the amount of activity on a given project over the past year. A quick look at these graphs shows how much activity they've seen in recent weeks, and gives visitors a sense of how dynamic a research community is involved in a particular project.

Above that graph, we've listed contributors and the number of posts they've made (which are tagged with the tool, i.e. "thermal-photography". The intent here is not to make things competitive (though that wouldn't necessarily be a bad thing) but to give people a sense of satisfaction that they've been a part of a communal effort, and a glimpse (to outsiders) of the number of people who have made the project happen.

By placing emphasis on the posting of content, we hope to highlight attribution for those who do good documentation and share it in a public venue — though anyone is welcome to use, adapt, repurpose, and improve upon Public Laboratory projects.

In order to be an active participant in our grassroots research efforts, you've got to reach out to others and share your work. This may not be natural for many people; contributors from many backgrounds are often accustomed to sole authorship credit, while others wonder who will care whether they publish or not. In a collaborative effort such as ours, however, success is gauged by how many others are able to leverage your work and reproduce or improve upon a set of tools you have contributed to. In an open-source context, seeing someone else replicate or adapt your work is a gratifying affirmation that your documentation and development work have resulted in legibility and accessibility for a potential collaborator, not an instance of plagiarism or infringement.

A network graph for the OpenStreetMap project shows the complex web of distributed contributions to a typical open-source project.

"Open source" means different things to different people, and with the above challenges in mind, it's important to make some distinctions. Strictly speaking, open source just means that you publish the source files of your work — and in the case of hardware, the associated design files. A good open-source project will provide legible documentation and support for others who wish to read and understand those files. If you've heard of "free software" (we'll invoke the refrain "free as in freedom, not as in beer" here), you might be familiar with its more stringent requirement that users have the right to "run, copy, distribute, study, change and improve" the software. This is the basis of our approach to open source, public, civic science — and it underlies our community's aversion to proprietary non-free (in both senses of the word) software such as Photoshop or Google Earth.

The noted lack of such freedoms in the area of scientific equipment and instrumentation — and the barriers that creates for a more legible and participatory approach to science — is a major motivation for our work.

Finally (for now) there is the idea of requiring anyone who takes advantage of these freedoms (by downloading, adapting, modifying and improving) to share their work in turn, under the same license. This requirement, known variously as a "sharealike" or "copyleft" clause, can be controversial, as it explicitly requires people (and companies) to become producers, and not just users, of open-source works. With some exceptions for datasets and privacy considerations, we have adopted sharealike licenses across all Public Laboratory content, and are in the process of releasing even our hardware designs under a sharealike license, the CERN Open Hardware License.

While these ideas may be unfamiliar for many, they make it possible for diverse communities such as ours to develop complex technical systems in a way which attributes and protects contributors' work, and ensures that these shared efforts remain public, accountable, and open to newcomers. They allow anyone to use PLOTS tools and techniques without needing to seek permission, while encouraging newcomers to contribute just as they benefit. They offer a public and grassroots alternative to closed, expensive, and proprietary systems of technology production which have resulted in a science that serves powerful and wealthy corporations above local communities and the underprivileged.

Such considerations are an important part of the PLOTS approach to building participatory environmental science collaborations. Ideally, our community's works will inspire readers or viewers to apply civic science ideas to their own lives — adapting tools to local issues — and with luck, they will become active participants in our research community by sharing their work publicly. In time, some may go on to organize local civic science groups, further the development of PLOTS' open-source tools, innovate new technologies or approaches to environmental monitoring, and challenge and refigure the very structure of participation.

#4 Collecting Feedback on Draft Planning Documents with "EngagingPlans"

Chris Haller heads up Urban Interactive Studio, a technology consulting firm specializing in web and mobile solutions for urban planning agencies and firms. He is also the founder of EngagingCities where he helps urban planners understand and use the Internet and gives practical advice.

Providing an interactive website that encourages stakeholder input on public policies is a critical aspect of policy development. Historically, these systems have been expensive and time-consuming to set up. In spite of recent advances in the computerization of the public input process, planning officials still have had to rely on pricey custom-designed websites with features that were not always user- or manager-friendly.

One approach, exemplified by a new app designed by Urban Interactive Studio of Denver, is to use a website platform to create a customized website for each urban planning project. The Urban Interactive Studio app enables local planning agencies and planning firms to develop a customized micro-website tailored to specific projects to efficiently facilitate all of the external communication related to any project requiring public input.

The tool, EngagingPlans, is a hosted Software-as-a-Service (SaaS) solution that starts at a low monthly subscription price. It comes with extensive "out-of-the-box" functionality that can be enhanced with a number of optional modules. EngagingPlans has a smartphone app and can be integrated with social media sites. A user-friendly interface allows for easy content updating and activity monitoring.

EngagingPlans Public Engagement Features
You can think of EngagingPlans as a toolkit to help coordinate nearly any required or recommended element of public and stakeholder communication, including:

- sending announcements
- posting information
- collecting, managing, and responding to public comments
- managing surveys
- mapping
- displaying a project timeline and interactive calendar
- housing a document library
- maintaining a newsletter and blog

Renewing Will County, IL
Thanks to a grant from the U.S. Department of Energy, the Will County Illinois Land Use Department had the opportunity to update the County's zoning and building ordinances with an eye toward encouraging environmentally sustainable practices including energy conservation. They chose to use the EngagingPlans web platform to engage the community and stakeholders in the process.

The website not only is attractive but is extremely robust with a wealth of project information, education material, event information, a project timeline, a contact sign-up feature, links to the project's newsletters and blogs, and an annotated copy of the draft language under consideration in a format that allows for section by section public comment.

This annotation feature was used to collect public feedback throughout the comment period, supplementing the input from two open meeting workshops. Staff added comments of participants during the meetings, and they found it extremely useful to be able to download all the comments into a spreadsheet format in order to review, compare and process them.

Project coordinator David Dubois noted that, "EngagingPlans' document annotation feature was a valuable tool to help us solicit and then address public and internal comments. We didn't see it as a replacement for traditional public input through letters and public comment. But elected officials want us to go the extra mile to gather stakeholder input and this particular feature of EngagingPlans clearly did that."

The EngagingPlans public engagement platform has been used by numerous municipalities across the country, most recently in Cincinnati; Burlington, Vermont; and Dunwoody, Georgia. It will soon be rolled out for a project by the City of Denver.