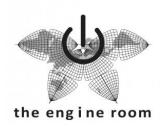
# USER ENGAGEMENT STRATEGIES FOR OPEN DATA





A TECHPRESIDENT & THE ENGINE ROOM REPORT

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# INTRODUCTION

Around the world, initiatives, groups and organizations are exploring the potential of data and technology to reimagine the relationship between citizens and the public sector. In Latin America, Eastern Europe and Africa, technologists and civic organizations are beginning to develop more sustainable methodologies for creating products with open data that address pressing civic problems. In the US, programs like Code For America and Code for All are facilitating the use of open data to inform public-sector decision-making and to develop platforms that improve civic life and government efficiency. Meanwhile, in countries across the world, the Open Government Partnership, the Open Data Institute and the Open Knowledge Foundation are creating momentum and incentive structures for governments to release datasets so that the public can more easily understand - and, perhaps, influence - their workings.

However, the present-day reality of open data initiatives has not yet come close to meeting the expectations of advocates, funders, entrepreneurs and close observers. This is true even in countries with the longest and strongest open government pedigrees. For instance, a recent study of the UK Government's transparency agenda<sup>2</sup> found that less than 10% of local authorities reported any increase in citizen participation related to the publication of spending data at the local level. The study found no sign of the data entering into a wider discourse. Similarly, 62 countries have joined the Open Government Partnership and yet most journalists in those countries haven't even heard of the initiative.

<sup>&</sup>lt;sup>1</sup> For strong examples, see <u>Desarrollando America Latina's 2013 program</u> or <u>Nigeria's Co-Creation Hub</u>.

<sup>&</sup>lt;sup>2</sup> "David Cameron's Transparency Revolution? The Impact of Open Data in the UK." By Ben Worthy. University of London - Birkbeck College, 29 Nov. 2013. Web. 23 Mar. 2014.

If open data is going to inform decision-making and enhance civic life, it must reach and engage end-users. The aim of this report is to take stock of lessons learned and strong practices used to engage end-users with open data products. Cases from Kenya, Indonesia, the United States and Nepal help to demonstrate promising strategies for user engagement. The report's aim is for these strategies to inform the design of both ongoing and new open data initiatives.

# **Key Terms**

**Open Government** is defined as initiatives, programs or interventions that work for all or some subset of the following three things: 1) Information Transparency: that the public understands the workings of their government; 2) Public engagement: that the public can influence the workings of their government by engaging in governmental policy processes and service delivery programs; and 3) Accountability: that the public can hold the government to account for its policy and service delivery performance.<sup>3</sup>

**Open data** is data that can be freely used, shared and built upon by anyone, anywhere, for any purpose; the cases explored here use data that has been released by either government or development institutions.<sup>4</sup>

An **infomediary** is anyone who presents data to a new or broader audience. The term is defined in this report as someone who turns the raw materials of data into an open data product that is useful to a broader base of people.

<sup>&</sup>lt;sup>3</sup> Heller, Nathaniel. "A Working Definition of "Open Government." Global Integrity. Global Integrity, 23 May 2012. Web. 23 Mar. 2014.

<sup>&</sup>lt;sup>4</sup> James, Laura. "Defining Open Data." *Open Knowledge Foundation Blog*. Open Knowledge Foundation, 03 Oct. 2013. Web. 23 Mar. 2014.

**Open data products** include infographics, visualizations, investigative reports, interactive mobile or web applications, or any other kind of storytelling, on any medium, that uses open data. Often, infomediaries have specific skill sets like code development, data wrangling and analysis, graphic design or journalism.

**End-users** for open data products are individuals that see and interact with such a product, and **strategies** are combinations of activities that are undertaken in order to achieve a goal.

# Scope

This report focuses on the potential of open data engagement to make governments and development institutions more transparent and accountable. It is assumed that open data can lead to greater transparency and accountability as part of a process where:

- 1. Data is published;
- 2. The data published reaches its intended public;
- 3. Members of the public are able to process the data and react to it
- 4. Public officials respond to the public's reaction or are sanctioned by the public through institutional means.<sup>5</sup>

For close explorations of the mechanisms by which open data can help to enhance transparency and accountability – step 4 – readers should look to research efforts such as those conducted by the <u>Institute for Development</u>

<sup>&</sup>lt;sup>5</sup> Peixoto, Tiago. "OpenGov Conversations: Tiago Peixoto on Open Data and Citizen Engagement - Disentangling the Relationship." Sunlight Foundation Blog. Sunlight Foundation, 20 Nov. 2013. Web. 23 Mar. 2014.

<u>Studies</u>. This report focuses exclusively on steps two and three: the involvement of citizen end-users

Additionally, there are a few aspects of open data engagement that are left out of this report. First, effective strategies for user engagement with open data products that don't have civic ends (of which there are plenty) are not explored here. Second, the various internal benefits of publishing open data – helping public officials to make more informed decisions, improving internal workflows or fostering a culture of sharing within institutions – are also left aside.

As a final caveat, the report includes two cases – from Mozambique and Nepal – that don't make direct use of open data but do surface engagement strategies that are relevant for open data products.

# **FEATURED INITIATIVES**

A handful of new programs, most notably the Open Government Partnership and Code for America, have created incentives for established institutions to release data. In turn, communities of developers and designers in cities around the world are discovering, playing with and hacking this data, often creating products that aim to narrow the gap between <u>citizens</u> and governments.

What are the most promising strategies for ensuring that citizens know about and use such new products? Below, readers will find initiatives in Latin America, Africa, North America and Asia that are experimenting with strategies for reaching and engaging particular audiences of end-users.

# Chicago, USA: Open Gov for the Rest of Us

Open Gov for the Rest of Us is an engagement program that seeks to cultivate relationships with members of particular, low-income, Chicago communities, learn about the kind of data that would most impact their lives and then, if it is appropriate and nothing similar already exists, develop open data products to meet those needs.

The program's goal is to reach people who could benefit from open data products but who otherwise would not hear about them or use them. The driving organization, Local Initiatives Support Corporation (LISC), accomplishes this by employing community organizers in each neighborhood. Organizers cite three central lessons so far. They are:

# 1. The Importance of Leveraging Existing Community Relationships

LISC has been running community improvement programs for over ten years, first with New Communities and then with Smart Communities. Because each program has relationship building as its backbone, Open Gov for the Rest of Us organizers benefited from preexisting relationships with community members when they began. The New Communities program was a 10-year effort that fostered a network of community organizers to provide residents and small business owners with different services – safety, education, business development, and housing. Because of this, says program officer Dionne Baux, "individuals had 10 years to self-select into this program."

Each organizer reestablished contact with individuals – parents, business owners, and other community members – who had been involved in previous LISC programs, and asked how data and technology could meet their needs. These

were, as Baux puts it, "people who were doing community improvement work before, who had begun to develop technology awareness and skills and wanted to do more."

## 2. Training and Education to Understand Users' Needs

Early on, organizers realized that the best way to identify and understand residents' data needs wasn't conducting surveys, but instead providing trainings on topics that were of interest to the residents. "The bulk of the organizing activity that I do is the classes that I teach," says Luiz Magana, who is the organizer in Chicago's predominantly Hispanic, low-income Pilsen neighborhood. "Because our services are free, I'm not asking anything of the residents in return," he adds, emphasizing how important this is for him and other organizers to gain the trust of the residents. Magana's classes start with computer skills then move on to community engagement and, finally, as he puts it, "open data and open government concepts."

In his classes, Magana shows students how to use existing tools like the <u>Crime</u>

<u>Around Us</u> platform as well as the <u>Chicago 311</u> system. This is useful for two reasons: it connects existing products with Chicago residents who might not otherwise know about them or use them, and it surfaces feedback that can make the products themselves more useful. For example, says Magana, if a student says something like "all I see are burglaries on this street, but I know there was a shooting," then he will spark a conversation about how they can, as a resident, not just use existing data about crime patterns but also improve it based on what they know.

# 3. Open Data Releases and Open Data Products Go on the Back Burner

As Baux puts it:

"We've learned that when you start with a product first, and then go backwards to analyze the needs of those that would use the product, it's a massive failure. We should learn from the for-profit industry, where they do a market analysis to make sure that they are actually putting their product in places where people will want it and use it."

Developing new apps is therefore a very low priority for the program compared to the development of an in-depth understanding about the data that citizens want and how they would use that data.

Once Magana and the other organizers have discovered clear community needs, they reach out to local government or technology developers. They push for the release of data that is not yet open, use an existing open data product or create a new product. In Englewood, organizer Demond Drummer learned that what residents most cared about was education – in particular, the attendance rates that were clearly tied to academic performance and school quality. Drummer and a group of parent leaders began working to gather and present this data. Similarly, in Chicago Lawn, people wanted data about housing foreclosures as they come online. Their goal was to work with banks to get new renters or homeowners into properties so there are less foreclosed properties in the community. They are currently in the process of creating an application that surfaces this information. According to Baux, "We identified the information need and then found the data."

In parallel, LISC organizes regular "data Friday" events that are meant to nurture a community of developers and designers who are interested in open government in Chicago. This way, when ideas for open data products emerge from their work (for example the application ideas mentioned above), then a team of technologists is already queued up to help build it.

For the organizers of *Open Gov for the Rest of Us*, identifying the issues that matter most to residents is a process without a clear start or stop date. Conversations with members of the communities that they work in happen in a variety of ways over long periods of time. This allows organizers to regularly update their understandings of target users' evolving needs. Organizers pass that info off to program designers, city officials and technologists.

# Kathmandu, Nepal: Galli Galli Portal for Data Requests

In 2013 Surabhi Pudasaini started *Galli Galli* because she sensed that citizens had a multitude of information needs – about issues that matter to them, like how to get a birth certificate or receive a pension – that weren't getting met. A lot of these information needs could be met by publicly available, but hard to find, data.

Pudasaini wanted to begin by understanding which data people wanted most. She spent six months visiting universities in Nepal, speaking with students and showing them a wiki for requesting and learning about government services that she had built. This was an uphill battle. It was also learning experience for the *Galli Galli* team, which realized that the digital sphere worked best surfacing data needs and engaging their target audience of young, wired Kathmandu residents. Their digital work surfaced two clear lessons:

### 1. Engage People on the Media Platform They Are Already Using

The university visits didn't work as Pudasaini had hoped. Students were excited and eager to help the community but didn't equate spending a few hours a day editing a wiki with community service. "That's why we started using Facebook," says Pudasaini, "because there is a sense of community there. It's seen as a space where you discuss things and connect with people. Because there are so many people on it, and people spend so much time on it, there's a lot of opportunity to get people to pay attention to the kinds of work we do while they're chatting with their friends and sharing photos. Also it's a way for people who aren't in Kathmandu to connect with what is going on at the center, from wherever they're based."

Using Facebook worked because it's where people already were and where there was a sense of community. *Galli Galli*'s efforts on Facebook have become a cornerstone of their work and a key foundation for engagement with open data in Nepal, where multilateral organizations and government have significantly invested in open data for civic impact. For some students in Kathmandu, says Pudasaini, Facebook and the Internet are synonymous: "It's seen as a space where you discuss things and connect with people. Because there are so many people on it, and people spend so much time on it, there's a lot of opportunity to get people to pay attention to the kinds of work we do while they're chatting with their friends and sharing photos."

# 2. Capitalize on Existing Relationships and Momentum from External Events

What have they done on Facebook that's worked? Galli Galli started on Facebook by reaching out to people they knew and posting things like: "If you have specific things you need to get once, ask us, we'll look into the process and share information about how to do it." By asking their existing contacts to interact

with their service on Facebook they achieved a level of engagement that they hadn't previously come close to. "A lot of the people who ask questions on Facebook are people I personally know already. I think it comes from that comfort level," says Pudasaini.

Gali Gali also leveraged important current events for momentum and made tactical use of Facebook ads. To get the most out of a widely-observed Nepali federal election they built an elections prediction tool on Facebook, capitalizing on election-day excitement to build awareness about their project. "We put it on our Facebook page, got over 300k views, lots of comments and activities," says Pudasaini. They used their Facebook ads budget to drive people to this tool, spending 20 USD to promote it. This helped them to build up a base of users for their page. They learned that it makes the most sense to use online advertising to drive people to posts that are already engaging people. "I don't think it works to make a Facebook ad to try to drive people to something that we think is important but that isn't getting any traction," says Pudasaini.

# Maputo, Mozambique: @Verdade's Offline Facebook Wall

Residents of the informal settlements around Maputo knew that, if they woke up early enough, they could get a free copy of the independent newspaper <a href="@Verdade">@Verdade</a>. People who commuted into the city center for work would arrive at @Verdade's offices before 7 AM so that they could get a copy before heading to their jobs. We had "all this foot traffic – all these people who are so excited to read the news that they would walk an extra 40 minutes to get the paper for free," says @Verdade advisor Janet Gunter. "It was such an obvious place and opportunity to engage people...who already have some kind of civic curiosity and thirst for information, so we set out to...make the barrier to entry zero." They did this by drawing the newspaper in chalk on a wall near the paper's office.

# Combining Low and High Tech Platforms to Promote Engagement Across Communities

Each Friday the newspaper distributor was tasked with ensuring that the newspaper had been drawn on the wall with chalk and that there was plenty more chalk out so that people could add requests, questions or comments.

People's questions tended to be about how they could access public services or address a problem related to the delivery of public services. @Verdade's editors would often step outside, take a photo of the wall and post it on Facebook. This would unleash a torrent of responses from the readers that were following along on Facebook. "There's an amazing integration," says Gunter, between the newspapers' two different demographics and the offline and the online space. The readers who have mobile phones and/or Internet access are able to interact with the readers who don't.

The result of this online to offline combination is to fuse the information needs of the largely disconnected populations who live in Maputo's settlements with those of the more wired residents in the city center. "If you make a high-quality comment it will be published on the front page of the newspaper, so if you're clever enough you can see it in print. The reporters also take citizens' queries, find answers and share their answers on both the offline and the digital wall. Their responses aim to teach people what can be learnt from the complaint or request – for example, the best way to follow up on a bad experience trying to get better water access.

@Verdade has managed to surface citizens' information needs without the more resource-heavy community organizing used in Chicago. They simply published their paper on a physical wall and invested staff resources in paying attention and responding to what was being said. While open data has not yet entered into the picture in Maputo, the efforts of @Verdade are making the barrier to entry for civic engagement close to zero and learning about the kinds of data that would most impact the lives of Maputo residents. A similar, ongoing effort can be found in Boston, USA, where Rahul Bhargava of the MIT Center for Civic Media holds workshops wherein community members visualize information on public spaces.

# Nairobi, Kenya: Kenya Certificate of Primary Education (KCPE) Trends and the Open Institute

The Open Institute has been experimenting with open data projects in Kenya for the past two years. Their open educational data product, Kenya Certificate of Primary Education (KCPE) trends, aims to provide Kenyans with analysis and visualizations of data about education through an online website that allows users to compare the performance records of Kenyan public schools.

In their engagement around KCPE trends, getting buy-in from the right stakeholders has been essential. "It all comes down to designing ecosystems where you have the right stakeholders involved from the very beginning," says Executive Director Jay Bhalla. Doing so has helped the Open Institute (OI) to reach other infomediaries such as community based organizations and journalists, as well as target end-users such as parents. They do this through a combination of free trainings, support programs, meetings, hackathons and roundtables for an educational task force.

# A Mix of Engagement Tactics

"We found that these building blocks worked," says Bhalla, for targeting key endusers, "they aren't chronological and they don't all have to be used." The building blocks include:

**Data literacy training:** As Bhalla says, "If people don't even understand what to do with the data how will they know what value they can derive out of it?" The institute trains people who are a part of groups that it views as key stakeholders for the open data it is working with, helping them to understand the value of the data. This understanding increases the chances that they'll come together to support specific initiatives.

**Data support programs:** Support programs are a degree more involved than trainings: someone goes into an organization and helps them to build a "data desk" that deals with both the data that the organization creates and aggregates and data from other institutions. "If you are able to show an organization the value not just of government data but also the data that they're gathering, it's better for the general ecosystem," says Bhalla.

Ol's support programs are distinct from the Code for [country] fellowship model, which embeds a data expert in organizations for a defined period of time. One clear difference – and, according to Bhalla, benefit – is that this creates a resource within the organization that isn't contingent upon the presence of a fellow. They help the organization to build its own human "data desk" instead of providing it with a temporary one.

**Proactive outreach to build partnerships:** "We reached out to everybody who has a role to play in the education sector," says Bhalla about KCPE trends. They visited with associations, city councils, civil society organizations and companies that are using this data for commercial purposes, asking them to load the website and

waiting for a reaction. "It's been interesting to hear people respond, saying things like 'wow I didn't expect it to be that bad,' or the 'difference between private and public to be that bad,'" says Bhalla. Seven OI staff members were involved in this outreach work.

Structured, more problem-focused hackathons: As mentioned above and reported on here, organizations working at the intersection of data and social change are beginning to see and react to the limitations of the traditional hackathon. An important aspect of OI's efforts to create an ecosystem around the open data that it is releasing and building products on are what Bhalla calls "structured hackathons." The structure refers to a defined period for identifying and learning about problems first and bringing in developers second.

**Roundtables:** Roundtables are the culmination of the capacity development and outreach work. The number of people who show up to the roundtable meeting is a key metric of the KCPE trends success. This is in marked contrast to many similar products, which measure success by website logins or unique visitors.

When representatives from all sectors attend not just one roundtable meeting, but regularly held meetings, it creates a degree of buy-in that wouldn't otherwise be possible. About 40 or 50 people attend and the meetings are held in primary schools. They cost about 300 USD (not including the human resources that go into organizing them). Roundtables generate longer lasting engagement among people whose support is necessary to achieve meaningful engagement with open data products.

Each of these components help the KCPE trends team to reach and engage a combination of other infomediaries, such as NGOs and groups of parents and students, and to develop a much deeper understanding of the problems that their website tries to solve. The KCPE trends team knew their goal was to improve

the state of the primary education system in Kenya. They learned key details of the problem – for instance, the relationship between how clean a school's toilets are and girls' performances – as a symptom of the engagement tactics that they employed. This has helped them to begin finding and developing solutions towards improving education standards. Their proactive outreach strategy also provided relationships with the allies they would need in order to do so.

# Indonesia and Kenya: Open Data Demand Workshops

In 2013 the World Bank Group's <u>Open Finances</u> program and the World Bank Institute's <u>Open Contracting</u> program undertook a pilot research project to investigate the link between the demand for data and its actual use. They wanted to test and better understand the relevance of open data on specific communities for the people living in those communities. How can open data go beyond the online realm, they wondered, and have more meaningful impact at the local level?

According to one of the project leads, Sam Lee, they were concerned about an overreliance on the infomediary model. According to this model, journalists and civil society groups will access and repackage information in its most raw format and take it to interested communities. However, at the early stages of open data and at the most local level, does open data about a particular community actually reach that community? Lee wondered: "If the infomediary model isn't working to reach the most local communities, it would be difficult to assess just how useful open data is at the local level. This project took data directly to the most local level possible." Lee and the rest of the pilot team wanted to find a way to get beyond the infomediary model and engage local communities with relevant data.

They conducted pilots in two rural villages in Indonesia and Kenya. The effect of the pilots was to transform members of these communities from would-be users into data infomediaries.

## Have the Target Users Build It

The World Bank team wanted target end users to create the open data products that were meant for their use. To accomplish this, the team held small workshops where they presented residents with raw data from the World Bank's open finance program. "Our process was very straightforward," says Lee. "We filtered the data by location and presented it in as raw a format as possible so that we aren't injecting any biases into the engagement." In these workshops, people visualized data using poster boards and markers. The products resulting from these exercises were then shared with community members who were not part of the workshops. They took the drawings and infographic-like summaries of the data that they had created on poster board to the village market and showed them to other community members. They asked questions like: 'What do you know about this project?' and 'Do you agree with the status?' Many community members confirmed that the data about a particular development project was correct while others asserted that the data about a development project was incorrect – for instance, if a project was stalled.

By asking members of their target audience to create the open data products that would resonate most with them, these pilots connected raw data with demand for that data. The workshops and presentations of the poster boards in public spaces like town markets were an opportunity to have an open dialogue and space for feedback. "We found that there are tons of feedback and knowledge about activities taking place within a community," says Lee, "but not so much actionable knowledge – so we were able to inject information about

finances, contracting, and early results data and some decision points within the specific development projects. Combining that local knowledge and interest in what's happening with data was something that was wildly successful."

One key challenge, however, has emerged: "When we collect offline data we aren't bringing it back in a way that is systematic so that it can be compared with the data we already have. We need to prove how valuable it is for the online realm to bring in offline communities," says Lee. The team aims to build stronger partnerships with leaders in communities that they are working with in order to strengthen and develop such information channels.

# CONCLUSION

The cases described in this report, while few, surface and elucidate key components of an effective user-engagement strategy. These components are:

- 1. Lay a foundation for user-centered design;
- 2. Embed a community organizer into the community of target users;
- 3. Co-create open data products with the intended end-users;
- 4. Include key stakeholders from the beginning;
- 5. Organize regular events for target users even if just a small handful will show up;
- 6. Link active participants into a network of volunteers;
- 7. When conducting digital outreach, leverage existing relationships.

A strong strategy does not necessarily require the incorporation of all seven components. Rather, the initiatives studied in this report often strategically

combined a few components for successful results. These components are described in detail below.

# 1. Lay a Foundation for User-Centered Design

Design that is based on an empirical understanding of intended end-users is a necessary foundation for any user engagement strategy. It makes products more usable and can provide, in the form of individual end-users who were interviewed by designers during the design process, a small pool of early users. User-centered design is the first step among many that can be employed to gather information about target users. Focus on user-centered design for open data products has already begun to make its way into practice. For example, two organizations currently involved in creating open data products, <a href="Code for America">Code for America</a> and the <a href="Sunlight Foundation">Sunlight Foundation</a>, incorporate <a href="user-experience designers">user-experience designers</a> into their programming by embedding them in local government and civil society groups, respectively.

# 2. Embed a Community Organizer Into the Community of Target Users

The cases studied in this report demonstrate that it's important to create a means for gathering information about user needs and behavior not just during the few weeks or months before a product is designed but also, throughout the entire life cycle of the initiative. Organizers who work full time with target users, such as LISC's staffers in Chicago, are able to continuously gather insights about the information that target users want and need, how they are using existing open data products and how existing products can be strengthened and achieve more meaningful engagement with end-users. Dionne Baux of Open Gov for the Rest of Us stresses that their efforts would not have worked without their full or part time salaried community organizers: "Changing the mind of a community happens over continued engagement with that community, serving as a trusted

resource that they could go to for information." According to Sam Lee, the World Bank team is working to develop partnerships with local organizations in order to "keep the communities we reached out to engaged after we leave."

# 3. Co-create Open Data Products with the Intended End-Users

End-users often have the best understanding of the kinds of stories, infographics or web and mobile applications that would be most useful for them. That's why cocreating an open data product with end-users increases the chances that the product will be useful and used. This was the central goal of the World Bank's projects in Indonesia and Kenya, where they were able to demonstrate that infomediaries with niche skills aren't necessarily needed to reach target users with open financial data; they took the data straight to workshops in small villages and asked participants to design posters. These posters served as low-tech versions of apps or websites.

More and more people creating open data products appear to be realizing how useful it can be to co-create with target end-users. Another example is the East African NGO Twaweza – which works in Tanzania, Uganda and Kenya – and has, according to consultant Ben Taylor, "realized that in order to get engagement it has to be much more participatory very early on. The end-users have to come into the process much earlier on, to show what's of interest to them."

# 4. Include Key Stakeholders from the Beginning

The Open Institute's strategy for user engagement with open educational data is rooted in the creation of an ecosystem of stakeholders. In addition to meeting with as many relevant actors as they can in a one-on-one setting, they also hold roundtable events that bring key actors together, building bridges between people who care about different facets of the issue at hand. The different groups

that come together at these events, by virtue of the fact that they all have different audiences, help to drive engagement to KCPE trends. They would likely not show up to events if it weren't for the preceding one-on-one meetings that the Open Institute makes a point of holding with the individuals and community-based organizations that have a stake in the issue of education reform.

With a simple gesture – calling or knocking on the door of appropriate groups – the Open Institute was able to get buy-in for their product, encourage attendance to their roundtables and solicit "commitments" from attendees. It's important to note that the ecosystem that the Open Institute is building consists of people and organizations that are already embedded in the context at hand.

# 5. Organize Regular Events for Target Users – Even if Just a Small Handful Will Show Up

At each Open Institute roundtable, attendees – from public officials to community-based organizations to individual parents – are asked to make a commitment related to the issue of education reform. This helps to maintain their engagement with the product and to bring about concrete improvements in the issue being addressed.

Similarly, Code for America's brigade program has learned about the importance of organizing regular events to build community. As Noel Hidalgo, head of the New York City brigade, puts it:

"What's important is our website and the Meetup page (as the first rung on our ladder of engagement), and a consistent series of events... Captains are asked to champion four events a month. They set a tone from the captain of the brigade out to the community. By having a series of high quality consistent events that feature open data, conversations

about open government, and that also talk about doing things in the open – like our to do lists – we've grown from 600 members in January to over 1,300 members."

Hidalgo helped write a toolkit for brigades, which guides new participants towards holding regular hack nights and meetups.

Code for All is the international version of Code for America, and its organizers are taking cues from organizers like Hidalgo. The embryonic Japan Brigade has put almost all of its efforts into holding regular events. As Code for All Japan's Hiroyasu Ishikawa describes it, the Japan brigade began with a Meetup that attracted about 100 people. Since those who attended were already interested in the topic of open data and open government, the brigade didn't have to do much outreach to achieve engagement with their monthly Meetups. Now, they see a regular – albeit smaller – crowd at each event (about 10-20 people). Attendees tend to come from both within and outside of city government. Ishikawa describes it as a "loosely connected community."

# 6. Link Active Participants into a Network of Volunteers

If the cases outlined here can suggest one recommendation for program designers working on open data engagement it's the importance of turning users into long-term collaborators. A great way to do this is by – as mentioned above – embedding an organizer into a target community to develop a deep understanding of target users' information needs and to hold regular gatherings. This is, however, significantly resource-intensive. Funding usually comes from private foundations, which means that this type of engagement ends along with grant cycles, creating gaps in funding and activities. The work itself, though, as Baux puts it, "can't be confined to the grant cycle." That's why LISC works to create a network of volunteers. "Individuals that have participated in our training

processes will tell a friend, neighbor, sister, what they've learned," says Baux. This creates new advocates for the program who serve as permanent sources of useful information about an open data product or program.

# 7. When Conducting Digital Outreach, Leverage Existing Relationships

As journalist Nancy Scola wrote recently in a reported profile of Code for America for the online publication Next City, to get a broad, representative base of users, creators of open data products are realizing that they need to do more legwork. They need to go "knocking on virtual doors" as well as actual doors. Knocking on virtual doors works best when it's done proactively and when existing relationships are leveraged. Researchers at the IBM center for the Business of Governance describe this well when they write: "A personal, one-to-one appeal from someone you already know is still far and away the most effective means of recruitment, and those relationships are usually based on face-to-face interaction. But because of the growth of social media, it is easier than ever to tap into networks of people who already have these kinds of relationships.":As Nepal's Galli Galli describe above, their most active participants are individuals who they already knew and reached out to when they began their Facebook engagement effort. If open data products use digital media to enhance whatever existing social networks and channels for reaching end-users, then they can more effectively engage users.

For those interested in social change, open data is a potentially powerful catalyst. Emerging interest among a variety of communities in open data, big data, and user-generated data should provide an impetus for ensuring that data reaches those it wouldn't normally reach, informs experiences, and creates knowledge and action. Growing interest in data as a mechanism for social change is itself an opportunity, and should be taken advantage of. However, it's essential to invest in strategic approaches that go beyond simply introducing data and related

technologies, involve more than just the efforts of designers and developers, and instead, build outreach and engagement of actual end-users to address their specific needs. This report has presented several approaches that have proved successful for achieving, in specific contexts, user-led applications, and which may prove useful for adaptation in future efforts to create greater civic engagement and stronger accountability.

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