

PARTNER'S PERSPECTIVE: NNIP AND OPEN DATA IN PITTSBURGH

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JUNE 2014



The National Neighborhood Indicators Partnership (NNIP) is a network of organizations in three dozen cities across the nation. Local partners work to make data about neighborhoods more accessible and help local stakeholders apply data to tackle issues in their communities. Over the past three years, with the support of the John D. and Catherine T. MacArthur Foundation, the NNIP network explored how its partners relate to the open data movement and the potential for the two communities to work more closely together in the future. The report *Putting Open Data to Work for Communities* documents the broader lessons from the project. This *Partner's Perspective* relates how the local NNIP partner, the Pittsburgh Neighborhood and Community Information System, in Pittsburgh, Pennsylvania engaged with the open data movement in their community. Based on the author's personal experiences as of June 2013, it presents a rich picture of the information environment and how it is shaped by the local institutional and political context. We hope it provides lessons and inspiration for other localities interested in using open data to improve their communities.

CONTEXT FOR OPEN DATA

The Pittsburgh region is known as one of the most politically fragmented communities in the United

States. Allegheny County alone has 130 separate municipalities, including Pittsburgh, governing its 1.2 million residents. Many of these communities have fewer than 5,000 residents, and have very little capacity to produce machine-readable electronic records. In this context, most current large-scale data-sharing efforts involve data from the City of Pittsburgh and Allegheny County governments.

Within the City of Pittsburgh and Allegheny County, the quality of public information differs greatly across agencies, and few standards govern the format of information. No policies or directives regarding data sharing have been instituted by city or county leaders, and no open data legislation or directive has been formally introduced or enacted. One draft open data resolution was circulated for comment in 2012 by the chief of staff of one city councilmember, but was never introduced. Some members of the city administration questioned whether legislation was the appropriate vehicle for implementing open data policies.

Data-sharing practices vary considerably from department to department in the city and in the county. A small but growing number provide raw machine-readable data for download or by request. Others release data through Web-based forms, online as a PDF. Some agencies,

including Allegheny County's Recorder of Deeds, do not release any raw data and impose a fee for online access (though data access is provided at no cost in-office). Those seeking data from public agencies—including the Pittsburgh Neighborhood and Community Information System (PNCIS)—often find it beneficial to develop personal relationships with individuals who have data access, especially where a reciprocal “gift economy” exists around data sharing and processing.

Legal interpretations governing the release of specific datasets differ within and between governments. Without any formal open data policy or legislation, the reasons for denying data requests are often arbitrary. For example, the author received raw city property tax data for years, but the request for raw data was recently denied following legal review, even though the data appear on the city website in PDF format and are released by Allegheny County (for county taxes). Other recent data requests for nonpersonal information (e.g., pavement conditions) were also denied due to fears that the data quality was suspect. Other fears relate to inappropriate use of data; for example, Allegheny County does not allow online searches on its property assessment website by owner name because of privacy fears expressed by police and court officials.

Inconsistencies in data standards are also evident, and many property data sources use nonstandard formats for addressing and parcel numbering, making data interoperability a

challenge. Local governments also have not adopted conventional data standards that would allow third-party software developers to connect to city or county data systems through an Application Programming Interface (API).

PROGRESS IN OPEN DATA

The PNCIS was founded in 2005 to help community-based organizations obtain and use information on property and neighborhood conditions. The PNCIS originally started as a partnership of the Pittsburgh Partnership for Neighborhood Development, the University Center for Social and Urban Research (UCSUR) at the University of Pittsburgh, Carnegie Mellon University's Heinz College, and 10,000 Friends of Pennsylvania. As the project evolved, UCSUR began to play the lead role in its management, and the PNCIS was accepted into NNIP in 2008.

Through its mission of reducing blight, promoting neighborhood investment, and improving communities, the PNCIS (through the Pittsburgh Partnership for Neighborhood Development) developed a data-sharing agreement with the City of Pittsburgh (through Mayor Tom Murphy's administration) in 2005, and began to collect city data and share it through a password-protected geographic information system (GIS) website. The agreement limited PNCIS access to nonprofit, academic, and governmental organizations unless additional permission was provided by the city. Access was limited to noncommercial uses as an initial step in building the city's comfort level with data sharing, and to

reduce fears of misuse. At the time, restricted access was also an opportunity to offer subscription access to for-profit customers and provide revenue for PNCIS operations. UCSUR has not been able to update this initial agreement directly with the city to allow for broader access. Absent an updated legal agreement, UCSUR has been advised by university counsel to not share information broadly unless it is currently accessible to the general public.

To operate the PNCIS, UCSUR collects and transforms data about communities, maintains the PNCIS website, provides training and technical assistance to users, and promotes the use of information through its brown bag lecture series and annual users' conference. In recent years, the PNCIS has received a growing number of requests from users seeking raw data to use in Web applications or for internal use on GIS or database software.

UCSUR's first foray into open data was as a convener of an open meeting for anyone interested in the subject, at UCSUR's office in April 2012. More than 30 attendees participated, from a variety of backgrounds—government, community development, technology, and academia. The discussion was extremely informative and a key piece of advice was not to wait until a data-sharing platform or portal was established, just release data on a spreadsheet if that was most convenient. Other key topics involved the need for municipal data standards, potential roles for crowdsourcing, and

the need for an organization to serve as a broker and curator of public information.

Many of the relationships forged in this meeting and the continued visibility of UCSUR in relation to local open data has helped UCSUR connect with other relevant activities. One of the participants in the open data meeting, an engineer at Google's Pittsburgh office, invited UCSUR to serve on the planning committee for the Steel City Codefest in February 2013. Other members of the planning committee included representatives from Google's Pittsburgh office, the City of Pittsburgh, and the city's Urban Redevelopment Authority. The event sold out in less than 48 hours (more than 100 tickets), and was widely viewed as a worthwhile event among sponsors, participants, and others in the community. In addition to serving on the planning committee, UCSUR also provided data to participants, negotiated a new event-specific data-sharing agreement with the city through university attorneys, served as a coach at the event, and helped several teams develop relationships with potential clients and partners following the event. UCSUR has also included one team's product (a CKAN-based open data portal) in its fundraising efforts.

UCSUR has also continued to convene conversations related to open data since that first meeting. Several of UCSUR's monthly "Brown Bag" Speaker Series events have featured the work of those using data, including Justin Cranshaw (Carnegie Mellon), Jennifer Evans-Cowley (Ohio State), and NNIP member David

Bartelt (Philadelphia). The fourth-annual PNCIS Users Conference, held on June 7, 2013, featured another NNIP partner, Greg Sanders, who discussed open data efforts in Chicago with an audience of more than 125 people.

In addition to UCSUR, several other key open data champions have emerged in the Pittsburgh region. Their motivation can be grouped into the following four categories:

- They need data held by others to perform their work more effectively.
- They seek to share their data with others more efficiently.
- They hope to expand business opportunities by using public information.
- They strive to improve citizen engagement.

Some of UCSUR's most frequent government partners include Allegheny County's GIS Department and Department of Human Services and the City of Pittsburgh's Innovation and Performance Manager Chuck Half. Several councils of government (COG) and other organizations have also come together to collectively address blight and abandonment issues in more than 50 municipalities outside the City of Pittsburgh, and now recognize the role of property information in their success. These organizations are now partnering on proposals with UCSUR to create shared software for municipal officials, and have been the driving force behind UCSUR's interest in a multimunicipal open data platform. Other partners include Pittsburgh Dataworks (a recently founded "big

data" economic development initiative connected with IBM's Pittsburgh office), university researchers (including Carnegie Mellon University's Traffic 21 initiative, a multidisciplinary initiative to design and deploy information and communications technology-based solutions to transportation problems), and UCSUR's traditional audience of community development corporations.

One missing champion is local political leadership. Despite the City of Pittsburgh's participation in the Steel City Codefest and partnerships with the PNCIS, most involvement has largely taken place through the initiative of individual city staff members, and not through top-down policies. UCSUR also began to lay the groundwork for open data with Allegheny County's Chief Executive Rich Fitzgerald, in a meeting to discuss opportunities for additional data sharing, and will continue conversations about this with him and his staff. Several of the data stories we shared resonated with Mr. Fitzgerald, and we plan to continue working with him and his staff.

One other group largely missing from the open data conversation is the city's fairly large community of software developers. Despite the popularity of Codefest, and the fairly large attendance (more than 25 participants) at programming-language meetups UCSUR staff members have attended (python, ruby, and iPad apps), UCSUR has not attracted many software developers to its events, including two

open meetings held under the banner of the Code for America (CfA) Brigade.

FUTURE DIRECTIONS

UCSUR has been integrating open data into many of its fundraising efforts, and involvement in open data conversations has presented new funding opportunities. With only one full-time staff member devoted to the PNCIS, UCSUR is now fundraising to build capacity to operate a Regional Data Center. Goals of the center include (1) making administrative, survey, census, and geographic data available and easy to use; (2) promoting the role of evaluation, benchmarking, indicator analysis, and GIS to support decisionmaking; (3) enhancing civic engagement; (4) increasing the capacity of community organizations to use data; and (5) advancing the region as a learning community that uses data to strengthen its ability to respond to pressing social issues.

New opportunities and interest from local funders have emerged since UCSUR convened its first open data conversation in April 2012. The Buhl Foundation has begun convening regular conversations about sharing data since previous foundation-funded projects to build a regional information infrastructure (through 3 Rivers Connect) ended. Through these conversations, UCSUR has just received support to develop the Southwestern Pennsylvania Community Profiles in partnership with NNIP partner the Providence Plan. Open data has also provided UCSUR opportunities to submit competitive challenge

grant entries to the John S. and James L. Knight Foundation and Bill & Melinda Gates Foundation.

In May 2013, Bill Peduto, a member of the Pittsburgh City Council, won the City of Pittsburgh Democratic mayoral primary. Open data, apps, and Code for America were all mentioned prominently in the 100 policies issued as part of his campaign. In a highly Democratic city, Peduto is a favorite to be the next mayor of Pittsburgh. UCSUR is partnering with others (including Pittsburgh Dataworks) to connect with Peduto and share ideas for implementing open data policies in Pittsburgh. Peduto is also an ally of the county executive, so UCSUR will also explore opportunities for city-county collaboration on open data.

UCSUR is also interested in establishing additional open data partnerships in Pennsylvania. We have talked to Philadelphia's Open Data Officer Mark Headd about establishing statewide data standards. We will involve him in our open data awareness and education efforts this fall, including our speaker series and efforts to share information with Peduto on how to structure meaningful open data efforts in Pittsburgh.

UCSUR will continue to work with smaller municipalities through its existing partnerships with local governments outside the City of Pittsburgh. Two separate coalitions of municipalities are now interested in using information to address suburban blight. UCSUR is advocating the development of a shared

multimunicipal open data portal, creation of standards for local government property data, and development of shared software tools for code enforcement. One of the recent Knight Foundation Community Information Challenge submissions (June 2013) explores work with smaller municipalities.

Our goals also involve building the capacity to work with the "civic hacker" community through the Regional Data Center. The Steel City Codefest shows that there are many programmers interested in civic hacking. Potential allies in organizing this community include Pittsburgh Dataworks, the Code for America Brigade, and several software developers/hackers. Challenges include the lack of an open data portal, no legal framework for open data, and limited capacity to provide technical assistance. The Code for America

Brigade program has provided a framework and "brand name" for organizing efforts in other cities, and UCUSR will continue to explore these opportunities with CfA.

For data-related organizations in other cities, we advise you to operate under the assumption that open data is coming to your city sometime soon. It is important to start conversations about open data to form alliances and be out in front of a topic of growing interest and importance. You can only do so much without political leadership, but convening conversations, establishing relationships, and providing learning opportunities around open data will position your organization to thrive in this new open paradigm.



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This paper was supported by the John D. and Catherine T. MacArthur Foundation. The views expressed are those of the authors and do not necessarily represent those of the MacArthur Foundation or the Urban Institute, its trustees, or its funders.

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