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Technology and the  
**RESILIENCE**

of Metropolitan Regions

# Toward a Market Approach for Civic Innovation

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Jane Fountain wrote a paper for the 2013 UIC Urban Forum “Technology and the Resilience of Metropolitan Regions” panel titled “Connecting Technologies to Citizenship.” In it, she describes many trends and practices that are emerging around the practice of civic innovation.

She writes of the persistence of the digital divide and the threat of a widening democratic divide, where residents do not receive the benefits of representation in communities where technology is absent. She also writes of the opportunities present in high population density, the rise of smartphones and other mobile devices, and the potential of “big data” to inform government services.

What I'd like to focus on in this response, however, is her question, “how civic are ‘civic technologies’?” In my world, I frame that question in terms of popularity with regular residents. “Civic” means public—that it has broad utility, broad acceptance, and is widely recognized as being a part of the fabric of civic life. This is the frame that we should bring to technology that seeks to serve residents in dense cities.

In my work at the Smart Chicago Collaborative, I helped create the Open311 system for Chicago's municipal government. This led to the publication of millions of rows of public data and simple methods for developers and nascent companies to read and write directly to the enterprise service request system at the city—the technology backbone for the delivery of services in the third largest city in the United States. This is the largest implementation of Open311 anywhere.

The existence of Open311 in Chicago, however, has not led to the creation of many new tools. Only a handful of services connect to this system, and none have any traction with regular residents. Even though it was widely requested by the developer community and touted as a major opportunity for economic growth, there are no widely used resident-focused websites or systems that use Open311.

## THE CURRENT STATE OF THE MARKET

The question is why, and I believe the answer is that there is no cohesive market for the civic-innovation sector of the technology industry. In fact, very few actors in the market even understand themselves to be a part of the technology industry. A dominant frame of the civic-hacker movement is the quick creation of tools, dashed off in hackathons or during feverish nights. The idea of being part of the trillion-dollar industry is anathema to this frame.

The natural end result of these efforts are interesting tools with good intentions that are of limited use to the masses in cities. The current status of the civic-innovation sector of the technology industry can be analyzed as follows:

- There is good movement in the provision of data (raw materials).
- There is an abundance of energy around the making of things (labor).
- There is a paucity of thought around why we make things or what is the best thing to make (market research, user testing, continuous improvement).
- There is even less thought around the relationship between the things we make and the universe of other things within which it fits (market analysis).
- Lastly, all of our things exist in an environment where their popularity is puny next to the opportunity (market penetration).

This state of affairs was evident in Professor Fountain’s paper, which reviewed a wide range of existing projects, tools, and companies. Included were municipal-driven projects like Citizens Connect, Commonwealth Connect, and the work in San Francisco as well as by companies such as SeeClickFix, CitySourced, and Granicus. She covered nonprofit projects like FixMyStreet and Electorate.Me.

This was a great scan that covered the field well, but it is illustrative of the jumble that defines the current state of the civic-innovation sector of the technology industry—it completely lacks a frame for understanding. And without a frame, it is difficult for the sector to grow and become sustainable.

## **FRAMING THE OPPORTUNITY**

When we view this milieu—this robust and creative mix of people doing work to improve lives in cities through technology—a natural frame emerges.

First off, civic innovation is a sector of the technology industry. This expansive language embraces a neighborhood blogger who measures cars with a homemade traffic counter as well as people who work at large startups looking to change municipal laws to support their business models.

There is a job titled “senior counsel of product” at Airbnb—the community marketplace for people to list, discover, and book unique accommodations around the world—whose job it is “advise our product and engineering teams to manage legal risk and ensure regulatory compliance on a broad range of legal issues.” That is a job generated by the civic-innovation industry—it is explicitly designed to interact with the municipal structure. Yet my guess is that no one at Airbnb feels they are a part of the civic-innovation sector—they just think they are part of a startup.

However, all of the graphic designers at Airbnb see themselves as part of a broader set of design professionals linked across companies, industries, and organizations. This frame is well-established in universities and other formal career development venues. Engineers segregate themselves into language-specific conferences like Pycon in order to deep-dive into their specialties. Civic-innovation practitioners meet at hackathons and hack nights, but their civic-innovation work is most often on the side, something other than what they do in their professional lives.

## **SUPPORT FOR STANDARDS**

Just as in any other economic sector, the civic-innovation sector requires certain macro conditions under which it can thrive. These conditions are often wrought through formal regulatory and

lobbying activities as well as the creation of standards. In this case, that revolves around data fluidity, format standards, ethical conduct, propagation of open-source software, and adherence to principles of open government.

Open311 is one such standard—it refers to a “standardized protocol for location-based collaborative issue-tracking.” As Open311 is adopted in more cities, companies that work in this space could scale up faster.

More standards are needed. Yelp supports the Local Inspector Value-Entry Specification (LIVES), but it has had very little uptake by cities. Currently, only a few cities are complying with the standard, which allows restaurant inspection data to be included on Yelp. Adjusting specific and custom municipal processes to a generic data standard is hard work and requires staff, whereas such positions often don’t exist in city government.

There are a number of accepted modes of operation that help the sector grow. Github, a web-based hosting service for software development projects, is the dominant method of collaborating on code. There’s a whole set of values inherent in Github—sharing, openness, and humility—that inform the sector. There’s an opportunity to build on these values to create real businesses.

There set of rapidly maturing institutions and organizations that support the creation of standards and sharing of work, including Smart Chicago, Code for America, and the Sunlight Foundation. All of this is the infrastructure for an industry we want to see.

## **DEEPER PARTNERSHIPS, MERGER AND ACQUISITION, AND CORPORATE GROWTH**

The Homebrew Computer Club was an early computer hobbyist group in Silicon Valley that started in the mid-1970s. Members of this group went on to launch the personal-computer revolution, but not without a lot of ambition, capital, and planning.

There is often a disconnect between the skills inside the nascent civic-hacker movement and the needs of the market for civic technology. Often developers “solve” problems that didn’t exist just because there was a dataset available to address the issue. There’s very little attention to the needs of regular residents during the brainstorming phase. Developers scratch their own itch and never ask what’s itching their neighbor.

Another issue is the skills gap. Older software companies—usually using older technologies—dominate the market for municipal software. Cities are naturally wary of making wholesale changes to existing systems that (ugly as they may be) actually work. Enterprising startups should seek to engage existing vendors to gradually improve their offerings through better design, added features, more fluid data-sharing—all of the values of sector.

An example is the municipal legislation management sub sector of the civic-innovation sector of the technology industry. It is dominated by Granicus, a vendor referenced in Professor Fountain’s paper. The main purpose of their product is to help their municipal legislator customers manage complex legislative processes, and they seem to serve that purpose well.

The public-facing websites generated by the Granicus system are less successful, by modern Web standards. This has led to the opportunity for an open-source system, Councilmatic, developed by Code for America fellows, and published for free on Github. Councilmatic could not exist without the legislative data published by a Granicus system—it absolutely relies on it. There’s no reason why Granicus shouldn’t “acquire” the talent behind Councilmatic and embed it into their product, making it better. But that hasn’t happened yet.

As the civic-innovation sector of the technology industry matures, these types of pairings will become natural, and provide benefits to people in cities all over the world. It's time for the period of great creativity and bursts of brilliance to meld into a period of focused value and sustained growth for the civic innovation sector of the technology industry.