



How Public Data Can Improve Services and Empower Communities

Daniel T. O'Brien, Northeastern University

In recent years, many local governments have adopted 311 systems as a convenient way for constituents to report public issues. My recent book *The Urban Commons* examines the reports received by Boston's 311 system, and my findings tell the story of *custodianship* — that is, how residents contribute to the maintenance of public spaces and infrastructure. This happens, for instance, when community members address problems ranging from everyday inconveniences, like cracked sidewalks, to the more dramatic damage wrought by hurricanes.

My research done in collaboration with colleagues at the Boston Area Research Initiative reveals how 311 systems can be most successful and captures the potential of the emerging field of *urban informatics*, which uses digital data and technology to transform the way cities are managed. This brief distills the key findings further elaborated in my book, offering suggestions for 311 directors, community members, and other leaders currently shaping 21st century cities, including leaders in governments, universities, corporations, and non-profits.

Lessons for 311 Directors

- **311 reports do not fully describe community issues.** Although the vast majority of 311 reports refer to real problems, the distribution of these reports may not accurately reflect the relative needs of a city's neighborhoods. Residents of some neighborhoods are more proactive in exercising custodianship for shared problems, others less so. Any effort to assess problems and needs should be sensitive to this reality.
- **311 reports are not akin to voting.** Some proponents of 311 and other "civic technologies" have treated them as novel modes of political participation. But it turns out that custodians are no more likely to vote, volunteer, or engage in civic activities than other residents.
- **Custodianship is an expression of territoriality — and that is okay!** When people report street light outages or graffiti, they are demonstrating a care and sense of responsibility for that space. It is therefore not unsurprising that 80% of reports come from reporters living within two blocks of the problems they report. This is a reflection of people's basic sense of territoriality. Contrary to stereotypes, territoriality does not always manifest itself in efforts to exclude others or "claim" spaces. In this case, territoriality fosters and indicates a special concern for the care that public spaces require.

Lessons for Policymakers and Legislators

- **Opportunities for urban informatics are everywhere.** Every day, city governments in the United States have millions of interactions that are captured in digital records — 311 and 911 calls, building permits, marriage certificates, school standardized test scores, to name a few. These digital records describe the urban landscape in unprecedented detail and can inform a huge range of policies and programs. In addition, emerging digital resources like social media posts and sensors also offer immense potential for better understanding urban dynamics.
- **“Open data” is a good start, but widespread data sharing is critical.** Many governments have embraced open data, but efforts are typically limited in scope and applicability. Cities have much to gain by thinking creatively about how data-sharing among agencies and sharing with external partners can catalyze new insights and tools. Such sharing can seed a fertile “civic data ecosystem” and make effective policymaking easier.
- **Universities can serve as the government’s research and development team.** Though a number of cities have established analytics teams, there are limitations to such work within City Hall. Universities should be leveraged to seize these opportunities. The novelty of both the data and the challenges faced by 21st century cities creates an ideal context for collaborations between urban officials and researchers who want to better understand and serve cities. Faculty and students are often ready to partner with governments. They just need to know whom to call and the questions of interest.

Lessons for Interested Citizens

- **It is about cities being smart, not “smart cities.”** Self-driving cars, sensors on every corner, public tablets to replace of payphones — these are the new technologies promised to make cities “smart.” But they are not necessarily accessible right now, nor is it always clear that they bring added value. In the meantime, cities can “be smart” by leveraging the detailed information already available to better understand local challenges and opportunities and inform improvements in policies and programs.
- **Empowering community members and organizations to use data should be a priority.** How can public value be gained from public data? Community members who are supposed to benefit from this new data have little influence on the processes by which they will be used, because regular community residents and the organizations that represent them rarely have the analytic skills needed to use new data resources. A priority must therefore be placed on creating new supports for citizens to use data to pursue their own ends.
- **There is a digital divide between big cities and everyone else.** Cities like Boston, New York, and Chicago have led the way in urban informatics, with other communities sometimes following. But the gap between well-resourced cities and others is widening. Focused efforts to expand new forms of data collection and use to many locales will multiply the impact substantially.

Urban informatics holds great potential, but such projects are often constrained by a focus on a single city. Consequently, opportunities for cities to share and replicate breakthroughs pertaining to shared challenges are not yet being seized. A new frontier for reformers lies in regional partnerships or national consortia, like the MetroLab Network, that help cities learn from one another about new ways to access and leverage data in policy and practice.

Read more in Dan O'Brien, *The Urban Commons: How Data and Technology Can Rebuild Our Communities*
(Harvard University Press, 2018)