OPINION

Daniel L. Doctoroff

Using Urban Data, Securing Public Trust

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Daniel L. Doctoroff is the founder and CEO of Sidewalk Labs, an Alphabet subsidiary focused on urban innovation. Previously, he was the President and CEO of financial media company Bloomberg and Deputy Mayor for Economic Development and Rebuilding for the City of New York.

Public data is held, on the one hand, as a resource for improving people's lives and, on the other, as a threat to privacy and user trust. **Daniel L. Doctoroff**, founder and CEO of urban innovation organisation Sidewalk Labs, argues that these competing concerns can be reconciled by establishing clear governing principles.

One promise of urban technology is that it allows us to know so much about city life. What condition is our infrastructure in? How is energy being wasted? Are the city's facilities serving all of its people? Answers to these questions could significantly improve life for the people.

The challenge is that there are legitimate questions about how data is collected and used, and who should control or manage it.

Sidewalk Labs takes the challenge of responsible data use very seriously in our projects including Sidewalk Toronto, a joint effort with government redevelopment agency Waterfront Toronto to create a new kind of mixed use, people-centric community by combining urban design and digital technology. We believe appropriate processes for responsible data collection and use can be established, to benefit the community and protect individual privacy.

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We have three overarching concepts that may be useful to cities as they think about how to use data for the people's interests:

1. Recognise and handle urban data as a distinct category;

2. Set clear guidelines for the responsible use of urban data; and

3. Establish an Urban Data Trust to oversee and audit urban data.

Recognise and Handle Urban Data as a Distinct Category

First, we lack a definition of what urban data is and is not. Information you voluntarily share with your bank, information that your favorite app collects about you under its terms and conditions, and information the census gathers about you are all very different.

Thus, the term urban data must be defined as a distinct category. What distinguishes it is that such data is collected in physical or community spaces where it is difficult to obtain meaningful consent prior to collection and use. It also has the characteristics of a public asset—it should be collected and used to make urban life better, and managed in a way that earns and maintains public confidence. Lastly, urban data should not only include personally identifiable information, but also non-personal, aggregate or de-identified data due to the impact that such data could have on people and the community.

Set Clear Guidelines for Responsible Use

Second, because urban data is collected in the public realm, it must be handled in accordance with a community-established set of guidelines that apply equally to all entities that collect or use urban data. For our Toronto project, Sidewalk Labs is proposing guidelines covering various aspects of the process.

When collecting urban data, organisations must have a clear purpose for its use, and this must benefit the community at large. No one should be collecting data for the sake of it. Organisations should collect the minimum amount of data needed for that purpose, and use the least invasive technology available. They should also inform the public in a proactive and clear way of what is being collected and why. Sidewalk Labs has co-created a project called Digital Transparency in the Public Realm to aid a global conversation on this.

Other guidelines include making non-personal, de-identified or aggregated urban data publicly accessible by default and formatted according to open standards. Also, urban data should not be used to target advertising to individuals without their explicit consent. Sidewalk Labs has already committed that we would not sell personal information to third parties or use it for advertising purposes.

Establish an Urban Data Trust

Part of using urban data responsibly involves making sure that no single entity controls it. But who should be the steward of this valuable but sensitive asset?

For our Toronto project, Sidewalk Labs has proposed to create an independent entity called the Urban Data Trust to manage urban data activities. Managed by a board appointed by public officials, the trust would act similarly to internal review boards at academic institutions to ensure responsible practices.

The trust would have three main roles. First, it will review and approve Responsible Data Use Assessments (RDUA). Any entity seeking to collect or use urban data would first need to submit an RDUA, which would document how the effort complies with guidelines, the purpose of data use, what data would be used and how, legal compliance, and a risk analysis for data collection and use. To aid public awareness, the trust would publish summaries of RDUAs for approved data activities along with a map of sensors collecting data.

Second, the trust would formalise and enforce urban data agreements with all entities whose RDUAs are approved. These would be similar to commercial data licencing agreements, contractually binding the entity to follow through on its RDUA.

Third, the trust would audit urban data and its use to ensure that entities comply with their agreements. Logically, such audits would take place frequently, depending on the extent and sensitivity of the data in question.

The governance of the trust will need to evolve over time, and will be specific to a given city's political and cultural traditions. In cities with a strong civil society, the non-profit structure might be best; in cities with strong traditions of appointed or elected bodies handling technical issues, that could work; in some places, government may be the best choice. In any case, the trust must ensure that urban data is collected and used properly.

Ultimately, Sidewalk Labs believes every city will have to figure out their own guidelines and safeguards for responsible data use. Only then can cities realise the benefits of urban data while earning public confidence and minimising data-related risks.