Open Data in Toronto: A Community Perspective

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Civic Tech
TORONTO

Urban+Digital

Image: Accela/IDC

Executive Summary

The City of Toronto has historically made a strong commitment to open data, but progress has slowed in recent years.

We represent a community of technologists, designers, consultants, and engaged Torontonians, who are deeply committed to making Toronto more responsive, prosperous, sustainable and equitable, through tech and design.

Open data is one of the primary resources which enables this work, and we're concerned that open data is no longer the priority that it once was for the City. While strong municipal open data initiatives are enabling thriving civic tech communities and economies in other jurisdictions, in Toronto, things are moving slowly.

This report includes our perspective on the City's recent achievements in open data, and opportunities for the City to become a leader again. These specific actions -- most of which could be taken before the end of 2016 -- will help to get the City's open data initiative back on track, and will enable us to unlock value for all Torontonians:

1. Pass an Open Data Bylaw.
2. Assess the City's open data maturity level using the Open Data Institute's Pathway tool.
3. Build a proper open data portal by implementing user-friendly technologies like CKAN/DKAN or Socrata.
4. Include the name and contact info for the maintainer of each dataset.
5. Publish using common standards which are in use in other jurisdictions.
6. Obtain the right to publish any original data collected or created by third parties.
7. If an IT system can't currently output open data, fix it or replace it with one that can.
8. Datasets should always be posted as open data before they're used to enable City-built apps or websites.
9. Revamp the City's open government initiatives.
10. Make community outreach and event participation part of the job description for staff involved with open data and open government.
11. Allocate funds to enable and support community open data and civic tech initiatives.
12. Hire a dedicated Civic Tech Advocate.
13. Create an advisory board for open data.
14. Implement a mechanism to allow access to historical data for any open datasets currently provided only as snapshots.
15. There are many, many datasets in demand which would be valuable additions to the open data portal -- release them as open data.

Introduction

As long-time proponents of open data, and as organizations actively engaging with communities that use open data in Toronto, we offer our perspective on the state of open data in Toronto.

Who we are

Civic Tech Toronto is a community group which hosts weekly *hacknights* that bring together Torontonians to work on projects to help make the city more responsive, prosperous, sustainable and equitable, through tech and design. civictech.ca

Urban+Digital is a non-profit which stewards Civic Tech Toronto, and facilitates civic tech projects and partnerships. Urban+Digital organized Toronto's first Open Data Day, in 2013.

Why this report

We believe strongly in the importance and transformative power of open government and open data initiatives. The City has done a lot of great work on open data, but there remain significant gaps. We're concerned that without a concerted effort, these gaps will remain unaddressed.

Further, we believe that by working together -- across sectors and disciplines -- we can find new and unexpected ways of supporting each other in our own work.

Achievements

Achievement 1: An approachable, responsive Open Data team

As a Torontonian, it can sometimes be difficult to find the right City staff person to answer a question. The City's open data team goes above and beyond to make it easy: they're pro-active by participating in community events and social media, they're approachable and friendly, and they're responsive -- quickly responding to email inquiries, even if the questions are often complex or oblivious to the structure of government.

We can't emphasize it enough: it is a *delight* to work with Keith McDonald, Reham Youssef, Nicole Girardin, and with the past members of the open data team. They should be commended for the commitment they make to serving the community, and their approach should be a model

for other city staff. Their individual contributions cannot be overstated when evaluating the success of the City's open data efforts.

Achievement 2: Good datasets, with frequent updates and additions

Toronto's Open Data team seems to be well focused on acquiring good data sets with frequent updates and additions. We would like to see this extended to divisions themselves, such that all or most divisions both produce and use data from Toronto's open data portal, as a matter of policy, and of routine. The benefit would be to encourage a culture of excellence, and sharing with respect to data, as well as negotiation of common data format standards. These standards in turn, should improve the usability of the data for both internal city purposes, and for public consumption.

The *number* of datasets is a poor indicator of the *value* of the open data to the community, and therefore also a poor indicator of the success of an open data program.

Timeliness is important: we were happy to see, for example, a draft 2016 operating budget appear early in this year's budgeting process.

Achievement 3: Events such as Traffic Jam and the Toronto Public Library hackathon

Hackathons are -- above all else -- an excellent opportunity for Torontonians to meet City staff and others, and to work and learn together. By offering an opportunity for creativity and production, they remind us that we are *all* stakeholders -- and potential problem solvers -- in civic problems.

It's encouraging to see more and more divisions leading and participating in hackathons.

Achievement 4: Recognition with #2 ranking in PSD's Open Cities Index 2015

Toronto's good work in open data was recognized by being ranked the second-highest city in Canada for open data, in Public Sector Digest's Open Cities Index 2015. Though the methodology and the data used for calculating the index aren't open or available, it's a well-deserved honour for the City of Toronto.

Opportunities

While the 'Open Data in the City' staff report mentions some priorities, it doesn't suggest any concrete actions or set any expectations. **Here is what we would like to see in 2016:**

Opportunity 1: Open By Default

The City's Open Data policy was passed in 2011 (CIMS 002). While the policy was forward thinking at the time, best practice in governments has been evolving as we learn how to best implement Open Data initiatives. We believe the time is now right for City Council to express its support for Open Data, and we feel the City can best succeed as a leader on Open Data if the City Manager is responsible for it.

As governments learn how to work with Open Data policies, the trend has been towards mandates from elected officials as well as authority coming from the centre of bureaucracies. For example, New York City Council passed a landmark Open Data Law in 2012. Since then, amendments and public discussion on where the initiative should go have flourished. Likewise, the Government of Ontario passed an Open Data Directive in 2015, for which the Deputy Premier is responsible.

Recommendation #1: Pass an open data bylaw, modeled after NYC's Open Data Law and the Province's Open Data Directive, which requires the City Manager to ensure that City Divisions, Agencies, Boards and Commissions post data to the City's open data portal -- with provisions for audits to ensure compliance.

Furthermore, we suggest many of the recommendations in this report could be incorporated through such a City bylaw. These recommendations contain the icon 📖.

See:
- City of New York Open Data Dashboard: https://data.cityofnewyork.us/dashboard
- CityLab - Why New York City's Open Data Law Is Worth Caring About: http://www.citylab.com/tech/2013/03/why-new-york-citys-open-data-law-worth-caring-about/4904/
- Statescoop - New York City strives to add accountability to open data policy: http://statescoop.com/new-york-city-strives-add-accountability-open-data-policy/

Opportunity 2: Improved evaluation

The success of an open data initiative should not be assessed solely by looking at the number or amount of data that has been opened. A successful open data program is one that focuses primarily on positive impact, value creation, and productivity through adoption of standards.

Recommendation #2: Assess the City's open data maturity level using the Open Data Institute's Pathway tool (http://pathway.theodi.org/) and publish the results -- and action plan for progress -- on the City's website. (Based on an informal assessment, we believe that the City is at level *two* out of five on the ODI's Open Data Maturity Model - http://theodi.org/guides/maturity-model.)

Opportunity 3: A more robust open data portal platform

In comparison to other jurisdictions' open data portals, the City of Toronto's is *extremely weak*. It lacks important features like visualization, mapping, notifications, robust search, or social media integration. Implementing an open data portal platform is comparatively easy, and would have a *huge* return-on-investment through increased engagement, understanding and usage of open data. There are only two significant platforms to choose between, and neither is particularly expensive -- we don't even care which one you pick, just please stop stalling: pick one and implement it.

Recommendation #3: Build a proper open data portal by implementing user-friendly technologies like CKAN/DKAN or Socrata.

Opportunity 4: Per-dataset contact information 🗐

Many open data portals (including Ottawa's) include the name and contact information for the maintainer of each dataset. Not only does this make it easier, quicker and more encouraging for open data users to get answers to questions, it's a helpful reminder that there are real, live public servants who work hard to prepare and maintain these datasets.

Recommendation #4: Include the name and contact info for the maintainer of each dataset, alongside the dataset description on the open data portal.

Opportunity 5: Simplified and standardized formats 🗐

Datasets should be published using common standards which are in use in other jurisdictions. When that's not possible, an explanation should be posted on the portal explaining why. If standards don't exist, consult with the community on how to share the information in a way

which maintains data integrity without being too complex to use. (The Lobbyist Registry open data is notoriously difficult to use.)

Recommendation #5: Publish using common standards which are in use in other jurisdictions. Otherwise, explain why.

Opportunity 6: Data created or collected by third parties 📖

When negotiating contracts with suppliers, the City must obtain the right to publish any original data created or collected as open data (unless the data is sensitive). The province's Directive includes this requirement:

> "The Government of Ontario will obtain the right to publish as Open Data original data created or collected as an output of contracts with suppliers, unless the data should be excluded from being made available as Open Data."

Recommendation #6: Obtain the right to publish any original data collected or created by third parties.

Opportunity 7: Open data-friendly IT systems 📖

All new information technology systems must include functionality to output open data using an appropriate mechanism: API, real-time snapshot, or exported file. (Systems that can't easily output data probably have many other problematic limitations to beware of.) Older IT systems without this functionality should be upgraded to include it at the first available opportunity. The province's Directive includes this requirement.

Recommendation #7: If an IT system can't currently output open data, fix it or replace it with one that can.

Opportunity 8: Open Data First 📖

When new datasets are available, they should be made available as open data *first*, before the City develops apps using the data. For example, the City recently launched a webapp to track snow plows and the status of snow clearing across Toronto (toronto.ca/plowTO). This data is not available as open data. While the City's plow map is useful, open data allows residents to also access externally-built applications, such as DataMade's ClearStreets (clearstreets.org), using City of Chicago open data. ClearStreets was built at no expense to the City of Chicago.

Open Data First was (intentionally or not) the approach applied to the TTC open data, which resulted in app developers creating many great transit apps. These apps provide enormous value to Torontonians, at no cost to the City. This approach should be applied generally -- it

reduces costs for the City, creates opportunities for app developers, and results in greater benefit to Torontonians.

Recommendation #8: Datasets should always be posted as open data before they're used to enable City-built apps or websites.

Opportunity 9: More Open Government

The City's open data initiatives are generally well-regarded and relatively well-known. While open data is one of the pillars of open government, the city's Open Government committee has virtually no public profile. (Their web page explains that they offer staff training on open government, and that they conducted a staff survey in 2014. If they've done anything since then, we haven't heard about it.) Training is necessary -- but not sufficient -- for culture change.

Recommendation #9: Revamp the City's open government initiatives, because they won't be successful if they're only internally-facing. Consider that having open government and open data working in different silos (with very different cultures) might be the source of confusion or inaction.

Opportunity 10: More community engagement

While the City's open data team does a great job of having a presence in the community, there is far greater demand than the current team can fulfill. Toronto's civic tech community is large and growing fast -- and it would be able to create far more value for Torontonians if given more numerous and diverse opportunities to engage with City staff.

Many cities run hackathons and app contests. These can be impactful, but events and initiatives can be much more impactful -- without being more expensive -- when they're created *with* and *by* the community. While the city's open data team participates in open data community related events, it leads none and funds none, because the open data team doesn't have a budget for these important activities. 'Public engagement' is cited as a key priority, but is allocated little or no resources.

Recommendation #10: Make community outreach and event participation part of the job description for staff involved with open data and open government.
Recommendation #11: Allocate funds to enable and support community open data and civic tech initiatives.
Recommendation #12: Hire a dedicated Civic Tech Advocate (like Seattle). Or a Chief Data Officer (like San Francisco, Chicago, Boston, and Philadelphia).

Recommendation #13: Create an advisory board for open data 📑 -- with members from the City, the private sector, non-profits and residents -- to facilitate better dialogue and to drive progress on an ongoing basis.

Opportunity 11: Include and retain historical data 🔖

'Long Term Preservation of Datasets' is a principle in the City's open data policy, but is not practiced for most datasets. Too much open data is only available for a brief window of time.

Recommendation #14: Implement a mechanism to allow access to historical data for any open datasets currently provided only as snapshots. (With exceptions for extremely high-volume datasets, like transit vehicle locations.)

Opportunity 12: Release key high-value datasets

There are lots of excellent apps and websites in other jurisdictions which are built on open data, but for which the equivalent datasets are not available in Toronto. These apps and websites deliver enormous value to residents, and we want Torontonians to benefit from them. In order to do that, these datasets would need to be made available as open data:

- **TMMIS data**. In Philadelphia, Chicago and NYC, the equivalent data powers: Councilmatic (councilmatic.org)
- **Development applications**. In Chicago, this data enables: Chicago Cityscape (chicagocityscape.com)
- **Recreation facilities and programs**. In Montreal, some of this data enables: Patiner Montreal (en.patinermontreal.ca)
- **Sewage bypass logs**. In Chicago, this data enables: istheresewageinthechicagoriver.com
- **Financial transactions**. In NYC, this data enables: Checkbook NYC (checkbooknyc.com)
- **Snow plow locations and logs**. In Chicago, this enables: ClearStreets (clearstreets.org)
- **Call documents, historical.**

Recommendation #15: There are many, many datasets in demand which would be valuable additions to the open data portal -- release them as open data.

Conclusion

The City of Toronto has historically made a strong commitment to open data, but progress has slowed in recent years. We value the working relationship with have with the open data team, and we believe that building on that is an important way to realize the benefits of open data.

In comparison to Canadian cities, Toronto looks great for open data. But Torontonians do not compare their expectations against those of Edmontonians, Surreyites, or Ottawans. It's more appropriate to compare Toronto against similar-sized cities in the US and other countries. Many of those have gone far beyond an open data portal, when it comes to engaging residents through technology, design and digital channels.

We'd like to see strong leadership overcome the public sector's traditional fear of new technology and innovation, and work proactively with the community on initiatives as inspiring and impactful as many of those we see in other cities.

We pledge our continuing support to help the City where we can in making advances in the critical areas of open data and open government.