Employment and Social Development Canada
Emploi et Développement social Canada

How can civic tech help improve government service delivery?

2025 - 01 - 23

Canadian Digital Service
Service numérique canadien

Canada

This research, conducted by the Government of Canada's Canadian Digital Service, examines partnerships between civic tech groups and Canadian governments, with the goal to help public servants make informed decisions about if, when, and how to engage with civic tech.

Aussi disponible en français sous le titre:
Comment la technologie civique peut-elle aider à améliorer la prestation des services gouvernementaux?

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CAT: SG5-105/2024E-PDF

ISBN: 978-0-660-73987-8

We would like to thank the many collaborators who made this report possible by sharing their expertise and experiences, including contributors to the Civic Tech Field Guide, Civic Tech Fredericton, Civic Tech Toronto, Civic Tech YYC, Code for Canada, Ottawa Civic Tech, Ottwatch, Vaccine Hunters Canada, and Vaccine Ontario, and current and former public servants from the City of Calgary, City of Toronto, Government of Canada, and Government of New Brunswick.

How can civic tech help improve government service delivery?

Executive summary

Civic technology (or civic tech) is the use of technology, data, and design for the public good. Most civic tech projects are volunteer-led and many focus on making governments more accessible, efficient, and effective. In some cases, this means drawing attention to, or trying to fill a gap in, government services. In others, it means supporting or collaborating on government initiatives.

During the COVID-19 pandemic, civic tech initiatives emerged across Canada to help residents manage in this unprecedented situation. Perhaps the most widely known of these was Vaccine Hunters Canada, a volunteer-run effort to help eligible Canadians find COVID-19 vaccine appointments. As projects like these gained more publicity, awareness of, and interest in, civic tech grew among Canadian public servants.

This research, conducted by the Government of Canada's Canadian Digital Service, examines partnerships between civic tech groups and Canadian governments, with the goal to help public servants make informed decisions about if, when, and how to engage with civic tech. One of the key findings of this research is that context is everything: whether a partnership between civic tech and government makes sense, and if it will be a success, depends on the specific circumstances and people involved.

As a result, this report provides five case studies of partnerships between Canadian governments and civic tech groups, to anchor the key takeaways from the research in real-world examples.

This report also aims to equip public servants with practical tools to help make informed decisions, by including tips throughout and concluding with 20 questions for public servants thinking of partnering with a civic tech group.

Case study 1

Vaccine Hunters Canada and Vaccine Ontario

This case study illustrates that the emergence of a civic tech project related to a government service is a likely sign that the official path to that service (or absence of one) is not working.

Case study 2

River Watch Mobile

This case study is a story of a Civic Tech Fredericton project that became a service run by the Government of New Brunswick, due in large part to strong, trust-based relationships between civic tech and government.

Case study 3

BikeSpace Toronto

This case study demonstrates the advantages and challenges of working with volunteers, as well as barriers that government procurement processes may present to compensentaing civic tech contributors.

Case study 4

Web Experience Toolkit

This case study is an example of how civic tech groups can offer governments access to digital skills that they may not have in-house, when public servants invest in building and supporting a community of contributors.

Case study 5

City of Calgary e-scooter pilot

This case study turned to volunteers for help solving parking issues, and their approach shows how starting with a specific problem and being clear about government requirements and constraints can help set a partnership between civic tech and government up for success.

Civic technology (or civic tech) is the use of technology, data, and design for the public good.

Source: Pexel

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Introduction

Governments worldwide are facing increasing expectations that they design new services, and adapt existing ones, to meet people's needs in an increasingly digital world. The COVID-19 pandemic further heightened this imperative. The pandemic also shined a spotlight on volunteer-led projects that aim to raise awareness about, and address gaps in, government services. Of these, a great deal of public attention was directed at civic tech projects: projects that use technology, data, and design for public good. In Canada, perhaps the most widely known was Vaccine Hunters Canada, a volunteer-run, online crowdsourcing effort to help eligible Canadians find COVID-19 vaccine appointments.

At the same time, Canadian governments are contending with challenges related to hiring and retaining digital talent and building digital capacity in the public service. This can contribute to the service delivery issues that many civic tech projects focus on. It can also make collaborating with civic tech volunteers an attractive option for public servants looking for creative ways to leverage digital expertise to help improve government services.

While many Canadians may have heard of civic tech for the first time through projects like Vaccine Hunters, civic tech is an international movement that was born in the 1990s and grew up alongside the internet. Civic tech isn't always focused on governments, for example Civic Tech YYC project Volly aims to increase the number of people volunteering with local nonprofits and Civic Tech Fredericton created the Caring Calendar to help community organizations coordinate services to people experiencing poverty. When civic tech is focused on governments, engagement can take many different forms. In some cases, civic tech calls attention to, or tries to fill gaps in, government services, like New Brunswick's River Watch Mobile. In others, civic tech supports or collaborates with government initiatives, like BikeSpace Toronto.

People who have been involved in collaborations between civic tech groups and governments said that, while there are specific qualities that make a project a good candidate for a partnership, whether that partnership will succeed depends largely on the circumstances and the people involved. Given their context-specific nature, much can be learned from examining previous partnerships.

This report is intended primarily for Canadian federal public servants who are interested in civic tech, although it may also be helpful for others, including public servants in other jurisdictions and civic tech groups. It aims to help public servants make informed decisions about if and when to engage with civic tech, by offering an introduction to civic tech in the Canadian context, five case studies of partnerships between Canadian governments and civic tech groups, and tools to help assess whether a civic tech group might be a good partner for a government initiative.

Methodology

To inform this report, the Canadian Digital Service (CDS) conducted research consisting of a literature review and 27 semi-structured interviews between September 2021 and December 2022.

The research focused primarily on civic tech initiatives that aim to improve people's experiences with government service delivery, as the mandate of CDS is to help federal public servants deliver better government services.

The literature review focused on English-language academic publications and grey literature (materials or research produced outside of traditional commercial or academic publishing), mostly from Canada, the United States, and the United Kingdom. International repositories of civic tech groups and projects, including the Civic Tech Field Guide and the Code for All Global Network, were also reviewed.

Potential interviewees were identified by exploring the websites of civic tech groups and related organizations, and snowball sampling. Interviewees were eligible if they had experience working on at least one civic tech project as a contributor and/or as a government partner, and priority was given to people with Canadian experience.

For more detail about the research methodology, please see the Appendix.

What is civic tech?

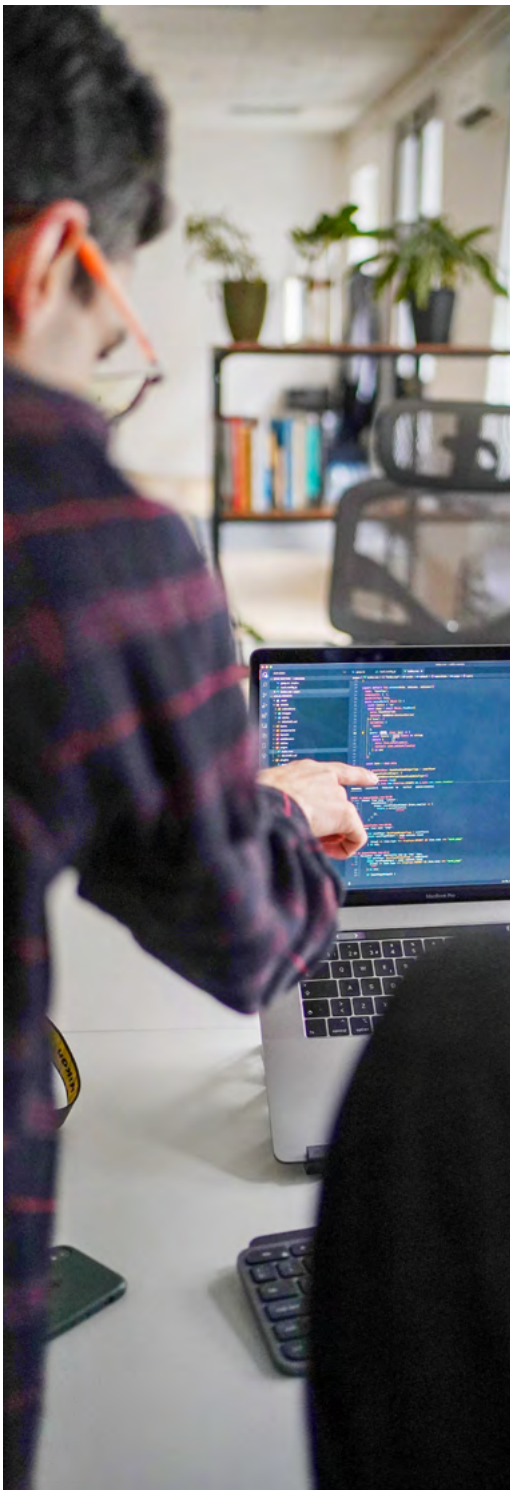
There is no single, universally agreed-upon definition of civic tech. In order for researchers and interviewees to have a shared understanding of the term, the following working definition of "civic tech" was developed for this project by drawing on numerous Canadian and international sources.

Civic tech: A working definition

Civic technology (or civic tech) is the use of technology, data, and design for the public good. Civic tech is a broad umbrella term that includes projects focused on citizen empowerment and projects focused on making governments more accessible, efficient, and effective. In this context, "civic" refers to the activities of people in a community, as opposed to the administration of a municipality.

Civic tech projects generally:

- **See technology not as an end in itself, but as a means to enhance the public good.**
- **Are often volunteer-led,** but may also be more formally organized, for example led by a registered non-profit or government department. For-profit companies may be involved in civic tech projects, but for a project or group to be considered civic tech, its focus must be on creating public benefit versus generating profit.
- **Involve intentional collaboration between people with diverse experiences and skill sets,** such as residents, developers, designers, activists, public servants, and policy makers.
- **Include a strong focus on building "with, not for"** the community that the civic tech initiative aims to serve.
- **Seek to apply skills and ways of working typically found in technology and design sectors,** such as user-centered design and agile software development.



Source: Unsplash

Civic tech in Canada: A brief history

Map of Canadian civic tech groups that are part of the Civic Tech Community Network, facilitated by Code for Canada. (Code for Canada, n.d.)

The civic tech movement in Canada began to pick up in the 2010s, in line with international trends. Canada's first civic tech group, Civic Tech Toronto, was founded in 2015, followed by other local civic tech groups starting up in cities including Edmonton, Fredericton, Montreal, and Ottawa. Today, there are 7 civic tech groups in Code for Canada's Civic tech community network across Canada, from Vancouver, British Columbia, to Halifax, Nova Scotia.

Related Canadian civil society organizations were also created during this time, including Open North (est. 2011), a Montreal-based social enterprise focused on open data and civic tech, and Code for Canada (est. 2017), a Canadian nonprofit that connects government with tech and design communities.

Governments across Canada also began to adopt open source and digital government approaches. Canada's federal "open by default" policy – the Directive on Open Government – came into effect in 2014, and governments began to publish more data in the open, including through the federal open data portal created in 2018. Governments also founded digital service teams, such as the Ontario Digital Service (est. 2016), the federal Canadian Digital Service (est. 2017), and the Nova Scotia Digital Service (est. 2019).

Knowledge development and resource sharing also picked up in Canadian civic tech communities in the late 2010s, led in large part by the formalization of civic tech groups and related nonprofits. For example, guides and toolkits were published for citizens interested in starting their own civic tech groups by several organizations, including, Civic Tech Toronto, and Civic Tech Fredericton. Code for Canada also published a Civic Tech Playbook for municipal public servants interested in engaging with local civic tech communities. Anecdotally, it seemed that many Canadian civic tech projects were sparked by collaborations between public servants and civic tech volunteers.

Even though civic tech communities are increasingly prevalent across Canada, not all projects or organizations that might fall under the civic tech umbrella self-identify as part of that movement. For example, initiatives like wireless community networks, including those in Maskwacis, Alberta, Sherbrooke, Quebec, and Halifax, Nova Scotia and Whose Land, a web-based app that helps users identify Indigenous Nations, territories, and Indigenous communities across Canada, didn't start within an existing civic tech community or explicitly call themselves civic tech, but could be considered part of the civic tech umbrella because they align with the goals, approach, and use of technology of the movement.

Case studies

While there are no universal rules about what types of projects are the best fit for a partnership between civic tech and government, trends from the research indicated several characteristics that make a government initiative a good candidate (see Tips for public servants #1). But even if a project has all these characteristics, success isn't guaranteed. The key ingredients for an effective partnership vary widely depending on the specific context and individuals you're working with.

That's why this report uses five stories of real partnerships between Canadian governments and civic tech groups to demonstrate some of the different forms that these partnerships can take, accompanied by key takeaways from the research and tips for public servants.

> "There are no universal rules about what types of projects are the best fit for a partnership between civic tech and government."

Stakeholders interviewed to inform these case studies often had different perspectives on the experience, including how effective the project ultimately was. The goal of these case studies is not to evaluate a project's success, but to ground the research findings in real-world examples, in order to help public servants decide if and when a partnership with civic tech might be beneficial.

Tips for public servants #1

Your government initiative may be a good candidate for collaboration with civic tech if:

- The project **focuses on a goal or challenge** your government or department is facing.
- It has **a tightly defined scope.**
- The project is **appropriate for volunteer contributors.**
- The project will **benefit from the skills and expertise of civic tech volunteers.**
- You and your team are **clear about how outcomes will be used.**
- You have **sufficient resources** to support a volunteer community and ensure follow-through happens.
- The project is **not critical to operations.** If it doesn't get done, or done in a specific way/by a specific deadline, nothing vital will break.
- The project offers **opportunities for small, incremental wins.** You don't need to completely rethink how you do government; for example, applying or improving open data sets you already publish is a great place to start.

Case study 1

Vaccine Hunters Canada and Vaccine Ontario

Identifying and addressing government service gaps during the COVID-19 pandemic

Vaccine Hunters Canada

Project duration: **2021-2022**
Location served: **Canada-wide**
Led by: **Vaccine Hunters Canada**
Government partner: **City of Toronto**

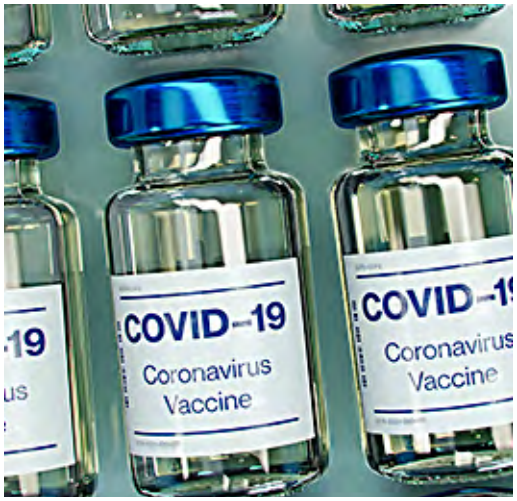
Vaccine Ontario

Project duration: **2021-2022**
Location served: **Ontario**
Led by: **Vaccine Ontario**
Government partner: **N/A**

Source: Unsplash

Problem

In early 2021, the COVID-19 pandemic entered its second calendar year and vaccines started rolling out across Canada. As eligibility expanded and demand for vaccines rose, there were also increasing reports of residents having trouble finding and booking vaccine appointments. In response, civic tech projects emerged with the goal of helping make it easier for people to find and book COVID-19 vaccines in Canada. Two of the most well-known of these projects were Vaccine Hunters Canada and Vaccine Ontario.



Source: Unsplash

Solution

Vaccine Hunters Canada was a volunteer-run crowdsourcing initiative where people across the country helped each other navigate Canada's vaccine booking systems and book appointments, by sharing information and links over social media channels including Discord, Twitter, and Facebook. The group also developed Find Your Immunization, an open source, self-serve online tool where residents could search for vaccine appointments by postal code. Vaccine Hunters Canada sought information about vaccine availability by reaching out directly to pharmacies, public health units, and other providers to get information. In April 2021, the City of Toronto officially partnered with Vaccine Hunters Canada by committing to provide the group with information about next-day appointment availability and city-run clinics. "The partnership was established with the help of a city councilor and Toronto Public Health," said the founder of Vaccine Hunters Canada, "the key benefit of this partnership was that it transformed Vaccine Hunters Canada into a verified, 'official' source of accurate vaccine information in the minds of the public."

Vaccine Ontario's appointment finding tool was a volunteer-run website that provided residents of the province with a self-serve, single online entry-point to search for available vaccine appointments in their area. Vaccine Ontario gathered information by scraping data and manually checking websites of different vaccine providers. Getting data directly in this way meant that Vaccine Ontario had a great deal of up-to-date information, but also that any small change to a provider's website could break their system. A Vaccine Ontario volunteer said, "Our biggest time spend wasn't software, it was constantly going between different sites and finding information to translate into structured data." At the height of demand, some Vaccine Ontario volunteers worked 12-14 hour days on the appointment-finding tool. "We could see by the page views and social media that a lot of people were using this," a Vaccine Ontario volunteer said, "That's what kept me going."

Outcomes

As of November 2021, Vaccine Hunters Canada had helped millions of Canadians find a COVID-19 vaccine and the Vaccine Ontario appointment finding tool had 2.2 million unique visitors. Both projects were retired in 2022.

Overall, the existence and widespread usage of the tools created by both Vaccine Hunters Canada and Vaccine Ontario highlighted two significant gaps in government services: the lack of open, standardized, machine-readable data on vaccine availability and appointments, and the absence in some provinces of a centralized place for vaccine information and booking that was easy for residents to access and understand.

Key takeaways

- **The emergence of a civic tech project related to a government service is a likely sign that the official path (or absence of one) isn't working for people.** Many civic tech projects could be considered "desire paths," which are unplanned paths made over time by pedestrians walking the shortest or most easily navigated route between two places. Desire paths tend to emerge where planned paths, like sidewalks or roadways, are longer, less direct, have gaps, or don't exist. Identifying and analyzing desire paths created by civic tech projects can help public servants plan more effective responses to similar situations in the future.
- **Civic tech volunteers often work on issues that they, their family, or their community are facing.** Volunteers from both Vaccine Hunters Canada and Vaccine Ontario said this was their primary motivation, and most other civic tech interviewees agreed that this was their main reason for volunteering on civic tech projects.

However, many interviewees also observed that good intentions alone don't guarantee that a civic tech project will be an appropriate or scalable solution to a problem, and acknowledged that civic tech communities are not the best fit to lead or sustain some initiatives. For example, most civic tech groups are well-placed to experiment with innovative ideas at smaller scales, but may not be equipped to build or sustain services at a larger scale.

Forest path, Montreal, Canada. Source: Unsplash

Tips for public servants #2

If a civic tech group starts a project related to your government department's mandate, these questions can help guide your approach:

- What may have prompted this project? What might the emergence of this project signal in terms of the broader ecosystem?
- How long-term is this project? Is the issue it addresses time-limited or indefinite?
- Who is leading this project? Is it an individual or a group? Are they directly impacted by the issue the project is seeking to address?
- Is there any overlap between this project and a government department's work? How might these overlaps lead to benefits or challenges?
- Might you or your department want to support or collaborate with this project? If yes, what opportunities might there be to do so? How might you set such a partnership up for success? What are the potential benefits and risks to you or your department getting involved?

Tips for public servants #3

When considering partnering with civic tech groups, it's important to keep contributors' motivations in mind. "People want to be involved in something that's going to have impact, something that's going to ship [be published or made available to users] and have a reasonable chance of success," said a Civic Tech Toronto co-founder.

Source: Unsplash

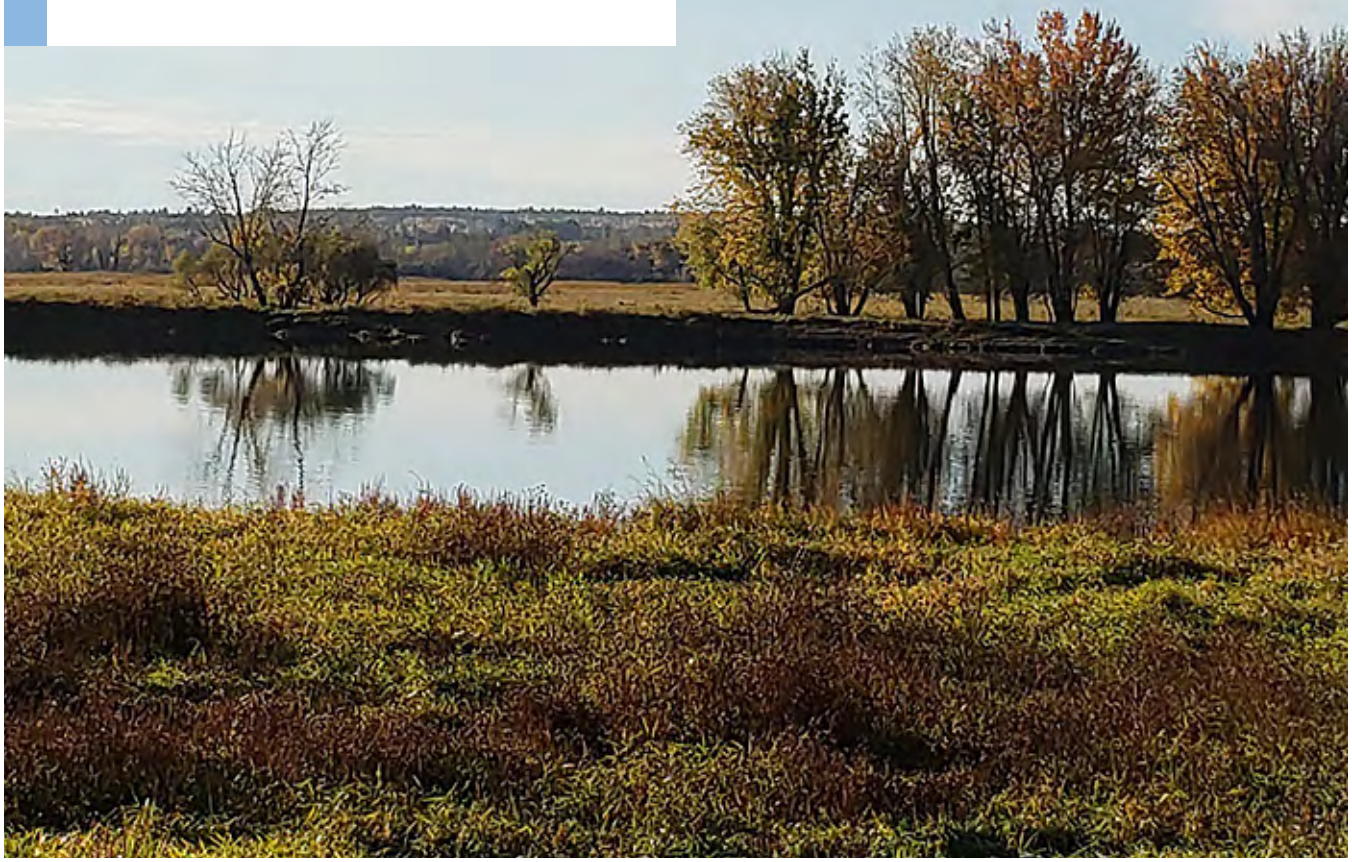
Case study 2

River Watch Mobile

Evolving from civic tech project into government service

River Watch Mobile

Project duration: **2017-present**
Location served: **New Brunswick**
Led by: **Civic Tech Fredericton**
Government partner: **Government of New Brunswick**



Saint John River, New Brunswick, Canada. Source: Pixabay

Problem

The Government of New Brunswick started publishing flood forecast data for the Saint John River Basin in the 1970s and began putting that data online in 2012, but the format wasn't compatible with mobile devices. This made it hard for people to use the data if they didn't have access to a desktop computer, which might be the case if they were flooded out of their homes, for example.

Solution

A provincial public servant pitched the idea of creating a mobile app for flood forecast data to civic tech volunteers, at the very first meeting of the newly formed Civic Tech Fredericton in 2017. A civic tech organizer who was at that meeting recalls, "[The public servant] said, 'This was a project we'd always tried to address. We have the wireframe, the open data, but we need something mobile-friendly." Civic Tech Fredericton decided to take on this challenge as the group's first project.

Working closely with the provincial public servant, volunteers built River Watch Mobile: an open source, mobile-friendly web app that made it easier to use a mobile phone to access government-provided flood forecast data. Since the data the app uses is open source, the civic tech volunteers were able to build it without officially partnering with the government.

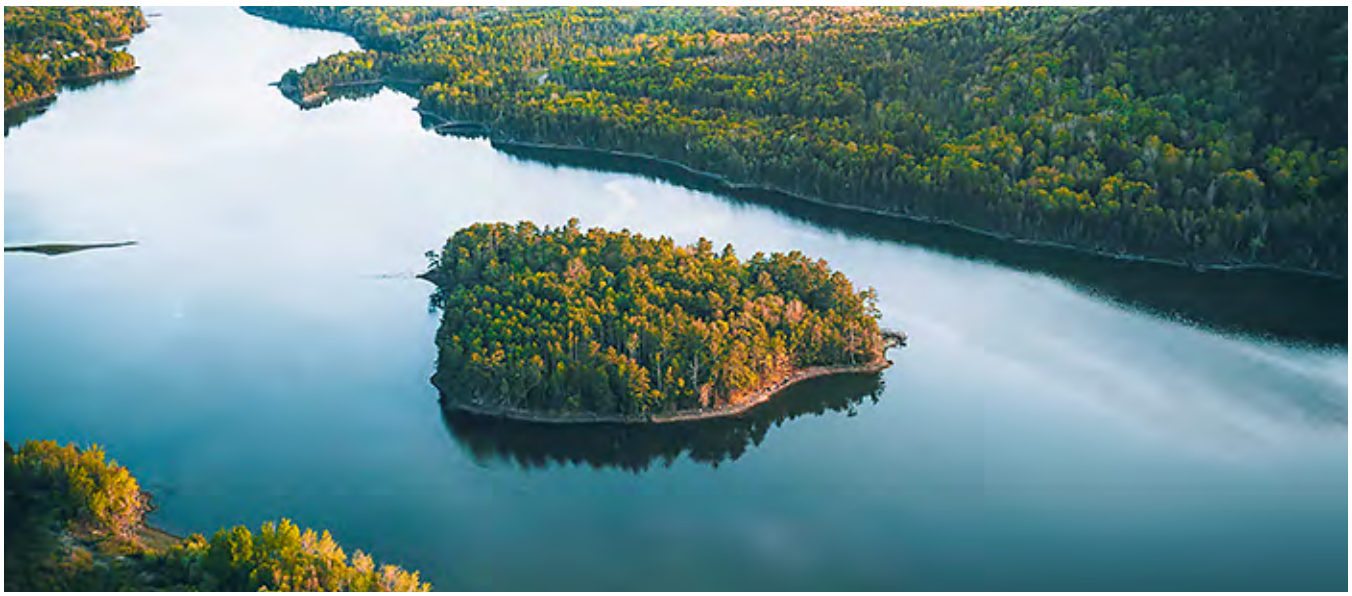
Outcomes

River Watch Mobile launched in March 2018 and was warmly received by many provincial elected officials and public servants. The app launch was also timely, as the springs of 2018 and 2019 brought devastating floods that impacted many communities along the Saint John River.

Government web analytics data shows that River Watch Mobile is still widely used during flood season. "Most of our users use desktop to connect to our systems, but in flood season, mobile users spike because of the River Watch app," said the provincial public servant who originally pitched the idea. He also said that the public profile and wide usage of the app made it easier to get resources to help improve it. The success of River Watch Mobile also led to more volunteers, projects, and partnerships for Civic Tech Fredericton. "No one knew about civic tech at the time [we started]," said a Civic Tech Fredericton organizer, "but now we have a lineup of people."

Civic Tech Fredericton maintained River Watch Mobile for two years, and in 2020 the Government of New Brunswick took over operations. The decision was mutual, as there had been some issues with data being displayed incorrectly in the app and concerns about the potential for changes in the format of the government's data causing bugs. The transition was smooth, in part since River Watch Mobile was built in the open on GitHub. The Government of New Brunswick has embraced the work that civic tech has done, and is now building on and improving the code that the volunteers developed. Civic Tech Fredericton also continues to provide volunteer support to the government related to the app, when needed.

"Isn't this kind of the ultimate aspiration of a civic tech project?" said the provincial public servant, "What we're trying to do at civic tech is fill in some gaps that the government isn't filling, and if a government sees what we're doing and says, 'you guys have a great idea and I think we should make it part of operations' that's great."



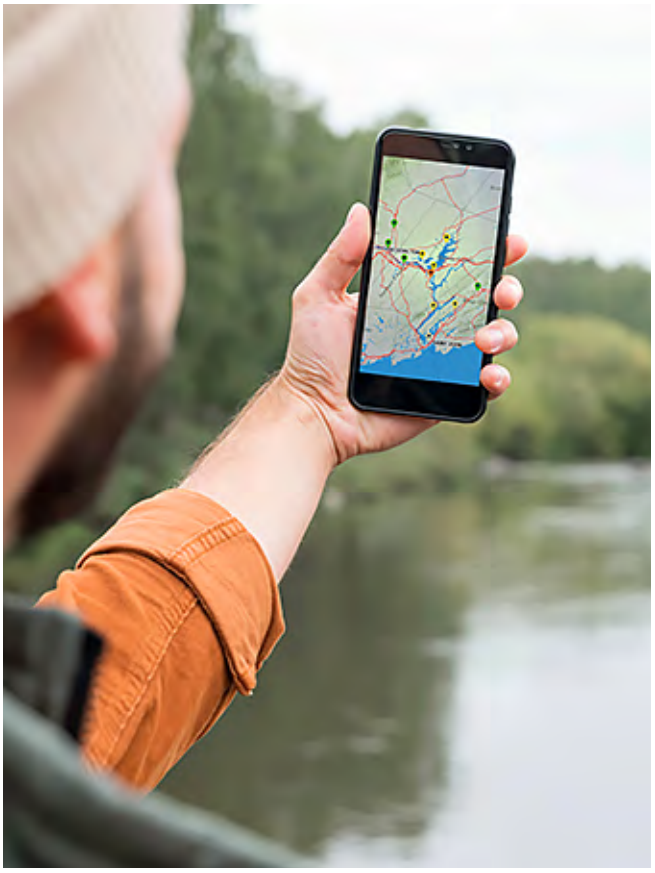
St John River, New Brunswick, Canada. Source: Unsplash

Key takeaways

- **Strong, trust-based relationships between civic tech and government are key.** If not for the relationship between the provincial public servant who first pitched River Watch Mobile and Civic Tech Fredericton contributors, the mobile app may not have existed or been as easy for the Government of New Brunswick to take over. Many of the partnerships between civic tech groups and governments that interviewees spoke about were also facilitated by pre-existing, informal relationships.

  Often, a government champion is necessary for an effective partnership with civic tech. A Civic Tech Field Guide Curator said, "With partnerships, it often comes down to one person inside the government who's willing to go to the weekly hacknight, answer the emails, and so on–to be the bridge to the outside."

  The absence of relationships can also be a roadblock. Many civic tech interviewees said one of the main hurdles they face is finding the right person within government to contact about an idea or project, and maintaining connections with departments when the individuals they know change jobs. "Even just knowing that there's a public institution that's relevant to your topic is sometimes hard to tell," said an Ottawa Civic Tech volunteer.



Photomontage CDS/Source: Freepik

- **Open data benefits from open communication.** River Watch Mobile was built on open source data from the Government of New Brunswick. Since Civic Tech Fredericton had a close collaborator from the government, they had a direct line to ask questions to inform design of the app.

  However, many civic tech groups don't have existing relationships with the government departments whose open data they're using. Some civic tech contributors reach out to public servants about government open data they're using in their projects, often with questions, alerts about issues with the data, or suggestions about how the data might be improved. But sometimes it's difficult for volunteers to figure out who to talk to about the data and how to get problems fixed.

Tips for public servants #4

If you're a public servant interested in civic tech, attending local civic tech meetups is a great way to learn more and start building relationships that may be the basis for partnerships in the future. If you're looking for a civic tech group near you, Code for Canada's Civic Tech Community Network is a good place to start.

Tips for public servants #5

Having a specific, easy-to-identify point person for open data your department or team publishes, preferably someone who has the technical expertise to answer questions or help address issues directly, can make it much easier for interested members of the public to access and use government open data.

Fredericton, New Brunswick, Canada. Source: Wikipedia

Case study 3

BikeSpace Toronto

Collaborating with a volunteer team

BikeSpace Toronto

Project duration: **2017-2018**
Location served: **Toronto, Ontario**
Led by: **Civic Tech Toronto**
Government Partner: **City of Toronto**

Downtown Toronto, Canada. Source: Unsplash

Source: Unsplash

Problem

BikeSpace was a Toronto-based civic tech project created to address a problem virtually every cyclist in the city faced: there wasn't enough bike parking.

The project started in response to a challenge that two City of Toronto employees brought to a Civic Tech Toronto hacknight in the summer of 2017. The City needed more detailed data about the condition of existing bike parking infrastructure and specific places where cyclists wanted more parking, and they hoped civic tech volunteers could help.

Solution

Toronto's civic tech community was enthusiastic about the opportunity, and BikeSpace evolved into a collaborative project built with diverse stakeholders including public servants from the City of Toronto, cycling advocates from Cycle Toronto, and volunteers from Toronto's civic tech community.

A key condition for the project's success was raised early on by a Civic Tech Toronto co-founder, who said it would take more than volunteers to make a project of this scale effective. Namely the project would need a paid product manager, because as the Civic Tech Toronto co-founder explained, "The product manager skill set is in high demand and it's hard to find folks willing to do it on a volunteer basis."

The City of Toronto was able to provide some funding to hire a part-time product manager for BikeSpace, but Civic Tech Toronto couldn't sign a contract or receive funds because it wasn't a formal organization. However, Civic Tech Toronto had a close relationship with Code for Canada, an incorporated non-profit, and asked if they might be able to help. Together, they decided that Code for Canada would enter into the official agreement with the City of Toronto, and hire a product manager for BikeSpace in collaboration with Civic Tech Toronto.

This arrangement required a great deal of flexibility and trust from both the City of Toronto and Code for Canada. Code for Canada had to enter into a vendor relationship with the City, which came with significant risk for the organization. Typically, a software contract requires a vendor to produce a deliverable that meets certain specifications, within a specific timeframe. But the vendor in this case, Code for Canada, would not be developing the software itself: BikeSpace would be built by volunteer civic tech contributors. As a result, the contract legally obligated Code for Canada to deliver software that it did not have direct control over creating, which was a risky position to be in. The high degree of trust between the partners and a strong shared desire to involve the civic tech community in BikeSpace made this arrangement possible.

Outcomes

BikeSpace hired a part-time product manager for 10-12 hours a week, who was central to attracting and organizing over 100 contributors, including a team of 20 core members. These volunteers collectively worked for over 1900 hours on every aspect of BikeSpace, from user research and web development, to data analytics and marketing.

The BikeSpace web app officially launched in July 2018, allowing Toronto cyclists to use either a mobile phone or desktop computer to report issues they encountered when trying to find bike parking. After the submission was reviewed by BikeSpace volunteers, the data was uploaded to an open, interactive dashboard that anyone could see and use. By November 2018, over 4000 unique users had accessed the BikeSpace app.

Some of the challenges BikeSpace faced was that the project experienced high turnover, an ongoing need to onboard new volunteers, City staff said that this sometimes led to delays or missed deadlines. This was due to the nature of volunteer work, which is often done in addition to people's other work and life responsibilities, and as a result may be one of the first things to be deprioritized when time becomes scarce or conflicting commitments come up.

There were also some specific features that the City of Toronto hoped BikeSpace would include, in order to generate data that could effectively be used to inform planning and policies. But since BikeSpace was led by volunteers and not the City, public servants said they felt uncomfortable being too direct. "There was a tension between a group of volunteers donating their time, and well paid public servants trying to boss them around," said a City of Toronto employee. Ultimately, some of the requirements on the City's list either weren't sufficiently met or didn't make it into the BikeSpace app at all, which made it challenging for City staff to use the data to inform decision making.

A City of Toronto employee said there was at least one instance where data from BikeSpace led to bicycle parking being installed, but ultimately "[BikeSpace] didn't become a systemic fix." Overall, City of Toronto staff said that they were greatly inspired by and learned a lot from working with civic tech volunteers on BikeSpace, and appreciated the opportunity the project provided to experiment and take risks. But that isn't the end of the BikeSpace story: in 2024, BikeSpace was revived as a wholly volunteer-run and community-driven civic tech project, which is continuing to work towards making Toronto kinder and safer for cyclists.

Source: Unsplash

Key takeaways

- **Civic tech initiatives are usually run by volunteers, which brings both benefits and challenges.** Most civic tech groups are decentralized and have a broad but frequently fluctuating membership whose capacity depends on the availability, energy, and interest of contributors. Further, interviewees said that, even when projects expand to large numbers of contributors, the heart of the initiative is often kept beating by a handful of volunteers. As a result, burnout can also be a challenge among civic tech groups.

  The BikeSpace case study illustrates some of the advantages (e.g. access to skills or experience governments may not have in-house) and drawbacks (e.g. high turnover, lack of accountability) to working with volunteers. Before deciding to work with a civic tech group, it's important to assess whether your project is a good fit for volunteer contributors.

- **Government procurement processes often present significant barriers to compensating civic tech contributors.** One reason is that, like Civic Tech Toronto, most civic tech groups are not formally registered organizations. This makes it difficult, if not impossible, for these civic tech groups to participate in formal partnerships with, or receive grants from, governments. An outlier is Civic Tech Fredericton, which is housed within the non-profit Greater Fredericton Social Innovation.

  As a result, most civic tech groups have to find creative workarounds to make formal government partnerships possible; for example, partnering with an incorporated non-profit, as Civic Tech Toronto did with Code for Canada in order to receive City of Toronto funding for BikeSpace. This also highlights an opportunity to explore different types of partnership agreements and funding mechanisms to effectively enable governments to collaborate with non-traditional partners, including civic tech groups.

- **Many partnerships between civic tech and government don't involve funding.** Not having a budget or a vehicle to compensate civic tech groups isn't necessarily a deal breaker. "There are lots of ways that governments and civic tech can work together that don't involve money changing hands," said a Civic Tech Toronto contributor. For example, governments have supported civic tech groups by providing meeting spaces, visibility, or access to government experts. These types of collaborations can help foster relationships that may lead to partnerships. For example, the City of Toronto hosted Civic Tech Toronto hacknights for a month, and a co-founder said that during that time "people got to go into government offices that they wouldn't have a chance to otherwise, and you had public servants showing up to those more than might be typical."

Tips for public servants #6

If you're looking for information on what vehicles you might have to compensate civic tech contributors, a good place to start is often by checking with your program centre of excellence or procurement team to see whether funding these groups fits within their terms and conditions.

Case study 4

Web Experience Toolkit

Building a government-led open source community

Web Experience Toolkit (WET)

Project duration: **2010-present**
Location served: **Canada-wide**
Led by: **Government of Canada**

Source: Pexels

Problem

In November 2010, the Federal Court of Canada ruled that the Government of Canada must deliver key websites in a usable format for blind and partially-sighted Canadians. This ruling brought even greater urgency to a series of web accessibility assessments that were already underway within the federal government, and ultimately gave rise to what would become the Government of Canada's Web Experience Toolkit (WET): a set of free, open source components that can be used to build accessible, interoperable, mobile-friendly, and bilingual websites.

Source: Unsplash

The Web Experience Toolkit started within the Treasury Board of Canada Secretariat (TBS), where a small team of federal public servants was tasked with helping government departments make hundreds of websites accessible and consistent. But many departments were struggling due to inconsistent interpretations of the accessibility requirements, limited expertise, and finite resources. "[Departments] didn't have the skills to do it themselves," recalls the federal public servant who led the WET project for its first six years, "We were having to send code snippets to help them out and we were trying to do this across 90+ departments... we realized this wasn't a manageable situation, so we decided to take a different approach."

Solution

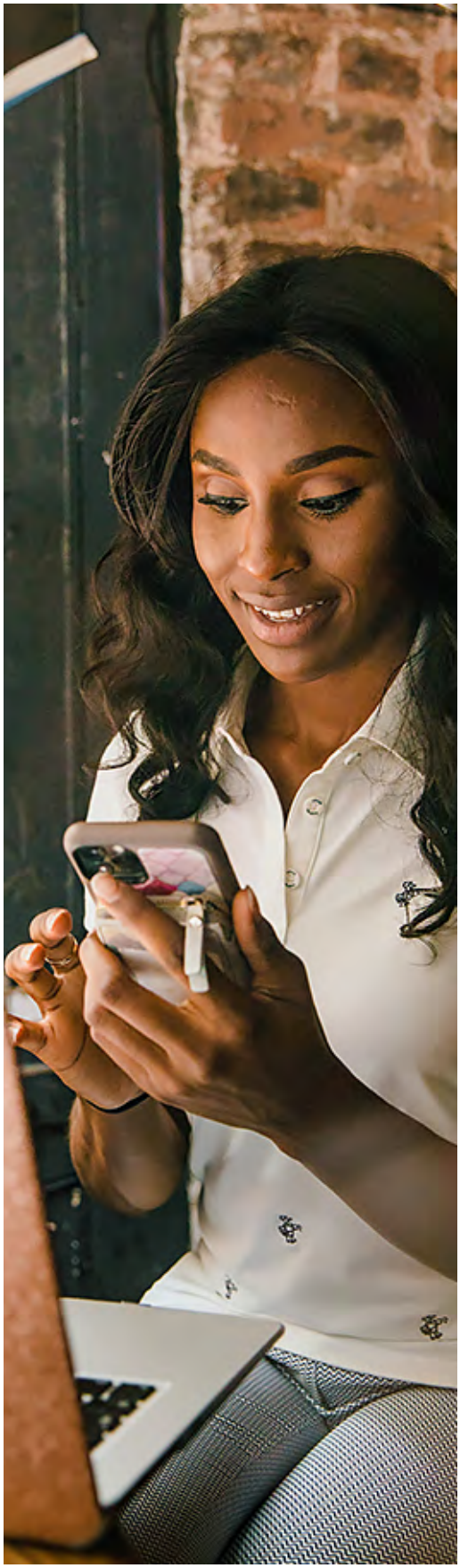
The new approach that the team took was to create reusable templates and tools, which were already tested and vetted against requirements, and put them in a central place where departments could access them directly. The Web Experience Toolkit was born.

The WET team also worked hard to build the toolkit in the open. In 2010, open source projects were new territory for governments worldwide. But the team believed that if WET was open source, it would not only let stakeholders outside of government benefit from the toolkit, but also build a larger, more diverse community of contributors who could help improve the toolkit for everyone. The team spent months working through policy and legal questions, and eventually got the necessary approvals. The code was posted first on a government website and then on GitHub, which is now the world's largest source code host.

Once WET was on GitHub, anyone inside or outside government could help improve the toolkit. But a project being open source doesn't automatically lead to a vibrant community of contributors. The community that grew around WET was nurtured by a core team of federal public servants working and volunteering on the toolkit, who invested time and energy into inviting people to get involved and actively supporting the growing community. Many contributors to the toolkit were employees from departments across the Government of Canada. There were also a significant number of civic tech contributors in Canada and beyond.

> It felt like a full time job... trying to be the grease that enables the collaboration... It was a constant effort but a worthwhile effort. The quality of the relationships will define the ultimate quality of the product.
>
> *- A former WET project lead*

Hackathon-type events were one key way that the WET team invited people to join the community and contribute. They also started weekly CodeSprints, which were mini-hackathons devoted to improving the toolkit. These events led to significant improvements to WET because they were intentionally designed with a clear purpose and specific challenges that needed to be addressed, a plan for how the outputs would be used, and people responsible for making that happen. These factors made it easy for anyone with the skills to jump into the project, help tackle an issue, and see the impact of their work in the toolkit itself.



Source: Pexels

Outcomes

Several members of the core team that led the Web Experience Toolkit in its early days said that building it in the open ultimately made it better. Ways that WET benefited from having contributors from outside of government included:

- **Making significant improvements to accessibility, faster:** "A lot of the initial work on accessibility was made possible by external contributors who worked in the field," said a federal public servant who worked on the toolkit, "Expertise in accessibility [within government] was very minimal in those days, which is one of the reasons we created the toolkit."
- **Ensuring WET met people's real needs, by enabling users outside government to test the tools:** "Government employees tend to have the latest assistive tech... but regular citizens may only pay for an upgrade every 3-5 years," said a former WET project lead, "By just looking inside government, you'd have a distorted view of what's normal."
- **Getting ahead of the curve on responsive design for mobile devices:** "If we had just [worked] inside of the government bubble, we probably would have missed out on the whole mobile thing," said a former project lead, "We probably saved many years of time and effort, and were able to support mobile devices much sooner than we would have been able to if we'd worked from a closed perspective."

The Web Experience Toolkit was also widely considered an open government success, and received several awards as well as a write-up in tech magazine WIRED.

Key takeaways

- **Civic tech groups can offer access to digital skills governments may not have in-house.** WET's success in leveraging contributors' expertise in accessibility and responsive design by working in the open are examples of the kinds of expertise that civic tech groups might bring to partnerships with governments.

  Civic tech interviewees mentioned many different ways that Canadian governments have leveraged civic tech as a community of expertise, including recruiting experts from civic tech groups to serve on advisory bodies, explicitly inviting civic tech contributors to participate in consultations, participating or recruiting participants for user testing (for example, through civic user testing groups), and hosting events, such as hackathons, aimed at solving specific challenges.

- **Open source and volunteer contributor communities require ongoing investment.** The core team of public servants who worked on WET in the project's early days invested in building and maintaining a strong contributor community, because they believed it was vital to the success of the project. As other interviewees confirmed, it takes significant time and resources to create and sustain a vibrant community of volunteer contributors, so it's important to resource this work if it is a priority.

Tips for public servants #7

If you're thinking about a one-time event, like a hackathon, to engage civic tech groups, consider whether this approach will have sustainable, long-term impact. While the Web Experience Toolkit (WET) used the hackathon model effectively, by inviting in civic tech expertise to advance specific goals and investing in connecting the community between events, interviewees said that this is an exception rather than the norm.

For a one-time event to have a long-term impact, you should at minimum:

- Intentionally design the event with a clear purpose.
- Have a plan for how the outputs will be used.
- Identify a person or team responsible for making the planned use of the outputs happen.
- Be confident that this approach is likely to deliver a solution that's workable in the government context.

Tips for public servants #8

If you're considering inviting open source or civic tech contributions, plan for the long-term investment required to create and sustain an active community of contributors, and weather inevitable changes in government priorities and available resources.

Case study 5

City of Calgary e-scooter pilot

Asking for help to solve parking problems

City of Calgary e-scooter pilot

Project duration: **2018-2020**
Location served: **Calgary, Alberta**
Led by: **City of Calgary**

Source: City of Calgary/Twitter

Problem

In 2018, the City of Calgary started a 16-month pilot program for shared e-scooters. As the pilot got underway, calls started coming into the city's 311 information line from residents who had questions or concerns about the e-scooters. The biggest issue was complaints about improperly parked scooters, which were at best a nuisance and at worst a danger.

Throughout the pilot, the City of Calgary gathered and published open data sets about the e-scooter trips on its Open Data Portal. This data contained rich information, including where trips started and ended, which was anonymized and aggregated to prevent people from being able to identify individual riders or access their personal information. City staff knew this data could be used to inform improvements to the e-scooter program, including helping to address the parking issue, but they didn't have the time or expertise to conduct the analysis themselves. So, they turned to civic technologists and researchers.

Solution

Leveraging existing relationships with the University of Calgary and members of civic tech groups, City of Calgary staff shared a list of challenges and questions they were encountering with the e-scooter pilot and asked for help. One of the most urgent questions they asked was: where might we put designated e-scooter parking, to help decrease the number of improperly parked scooters? The city offered the open datasets and staff time to provide support, and volunteers took up the call.

Many of the resulting projects were driven by researchers at the University of Calgary. For example, a team of engineering students created a comprehensive data analysis model that led to their recommendation of 20 e-scooter parking locations, based on the most frequently traveled routes, parking complaint calls to 311, and the proposed location's proximity to public transit. A graduate student in the Department of Computer Science also found that placing more frequent, evenly distributed parking areas on longer streets could encourage more users to end their trips at a designated parking location instead of parking them improperly, much like having more frequently available garbage and recycling bins can help decrease litter.

City of Calgary. Source: Unsplash

Source: City of Calgary/Twitter

Outcomes

The results and recommendations from these studies directly informed the City of Calgary's decisions about where to install designated e-scooter parking locations and how to further develop related infrastructure. These community contributions to city planning were not enabled by open data alone, but by open data combined with the time and expertise of public servants to help guide civic tech projects towards addressing real challenges the City was facing and developing solutions that were applicable to a government context.

Key takeaways

- **If approaching civic tech volunteers, bring a problem, not a solution.** The way the City of Calgary set up volunteer researchers to help improve their approach to e-scooter parking is a good illustration of what this looks like in practice. This case study is an example of a broader trend that Civic Tech Playbook for Canadian Municipalities observed in an analysis of several Canadian civic tech projects that began when a public servant brought a challenge they were facing to a civic tech hacknight:

  "None of these successful pitches [from public servants] came to the community with a solution at hand... Bringing a ready made solution to the community will limit creativity, subvert potential for collaboration, and ultimately lead to a bad product. It also gives the impression that you're looking for free labour, not a community-led solution."

  Many civic tech interviewees also said that they prefer to understand the context in which a problem is occurring before starting

to explore potential solutions, and that they see a shared understanding of the problem or goal as central to a successful partnership.

> "A lot of what government does, and how government does it, doesn't make sense to people outside."
>
> *- A Civic Tech Toronto co-founder*

This also means that civic tech communities are not usually appropriate partners in cases where a government department has a specific solution in mind (like a certain kind of app or website) and is looking for someone to implement it. In those cases, doing the work in-house or hiring a vendor may be the best route.

- **Government is a black box, so outsiders need a guide.** Few Canadians understand how government priorities are shaped and evolve, for example by election cycles; the ways that laws such as the Accessible Canada Act, the Privacy Act, and the Official Languages Act impact all elements of government including service design and delivery, infrastructure, and internal data flows; or the intersections and divisions of responsibility between or within different government departments or different levels of government.

  Any initiative seeking to improve government services must take these realities into account, but civic tech volunteers don't necessarily have that knowledge and it isn't always easy to find without a guide on the inside. Without that insight, civic tech projects may not be appropriate or adaptable for a government context. The projects using Calgary's e-scooter data were able to make recommendations that the city could use, in large part because of the guidance volunteers received from public servants.

- **Effective partnerships require stable points of contact.** Many interviewees spoke about the importance of having both a senior level champion and day-to-day point person (often at the working level) within government. The City of Calgary staff member who initially brought the e-scooter parking challenge was involved through the whole lifecycle of the project, and also worked to garner support from senior public servants for the initiative.

  If a civic tech group doesn't have consistent connections within government, any changes that may impact the priorities of the department (such as staff turnover, an election, or media attention to the issue) could have a significant impact on if and how the project moves forward. If a partnership is significantly stalled or suddenly cancelled, it can leave volunteers feeling their time was wasted and potentially sour the relationship between that government and civic tech groups.

Tips for public servants #9

Keep in mind that you're most likely to seed successful partnerships if you come to a civic tech community with an outcome you're trying to achieve or a problem you're trying to solve, rather than a specific product you're looking to build. You can definitely also bring ideas for how to get there, but it's important to be open to discussing and iterating your approach in collaboration with the civic tech community.

Tips for public servants #10

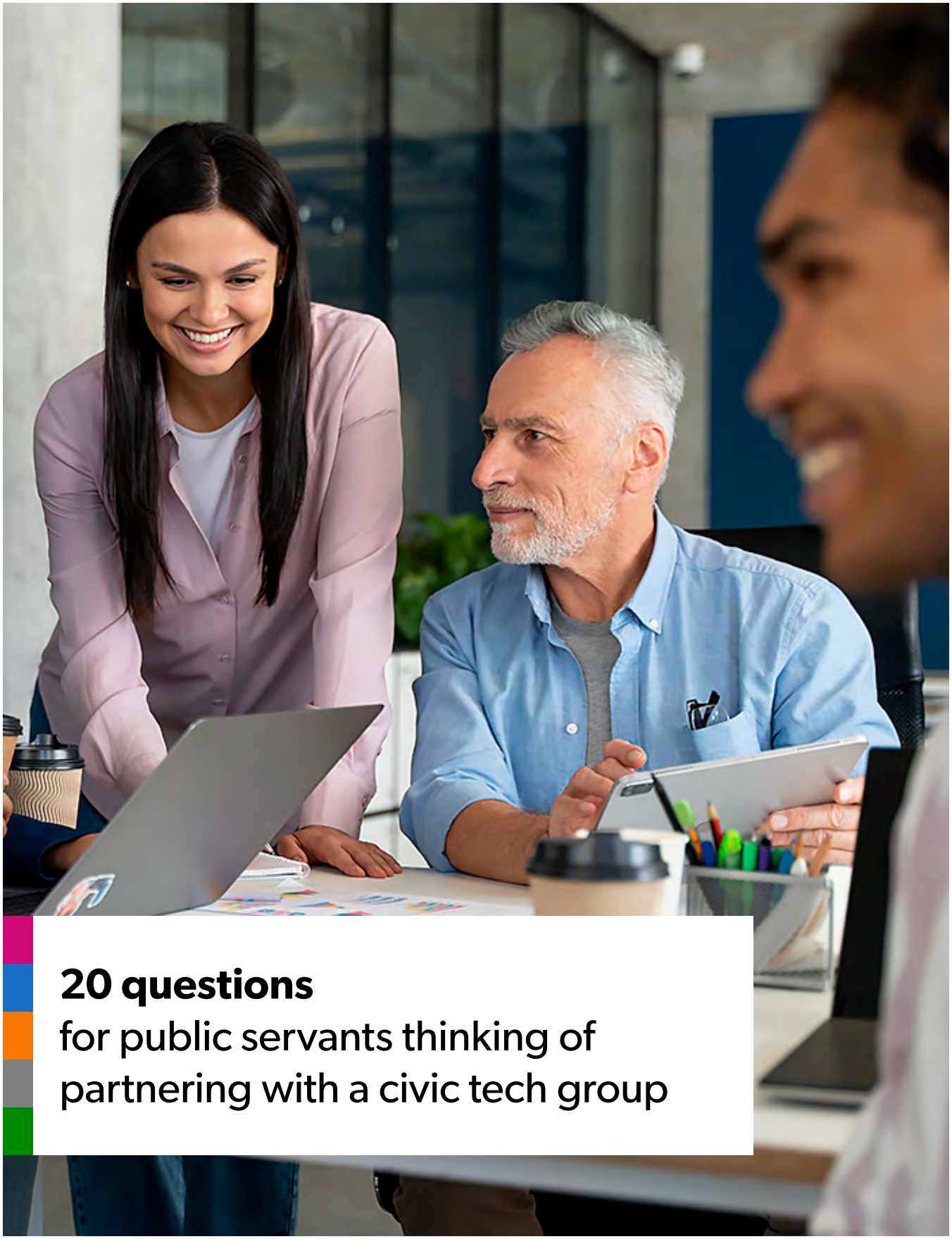
Be prepared to put in the time to help your civic tech partners understand and navigate government priorities, expectations, and ways of working. Similarly, civic tech contributors considering working with a government need to be prepared to deal with a certain amount of process overhead and be open to accepting that there are often good reasons for government requirements, even if they sometimes result in projects moving more slowly.

Source: Youtube

Tips for public servants #11

To provide stable points of contact, it's important for public servants pursuing a partnership with civic tech to:

- Ensure that there is support within your department at both the management and working levels.
- Facilitate connections between civic tech volunteers and key point-people within government, including identifying a consistent point-person on both sides.
- Embed a commitment to the partnership in writing, whenever possible.



20 questions
for public servants thinking of partnering with a civic tech group

Source: Freepik

As the case studies and research findings in this report illustrate, whether civic tech is the right partner for a government initiative depends on the specific goals and context of that project.

If you're a public servant considering a partnership with a civic tech group, these questions may help you decide if civic tech is an appropriate partner for a given initiative and, if so, set that partnership up for success.

Determine if your initiative is a good candidate for collaboration with civic tech:

1. Do you have a specific, well-defined goal you want to achieve or problem you're trying to solve?
2. Is this problem solvable by people outside of government? Might the civic tech community have the skills and interest to help?
3. What will happen if this project doesn't get done? Or doesn't get done within a specific timeline/in a specific way?
4. Are you trying to save money by using unpaid labour? If so, proceed with caution.
5. How will you define success for this project?
6. How will the outcomes of this project be used?
7. How will you make space to iterate during this project, including incorporating changes in context and/or lessons learned?

Source: Pexels

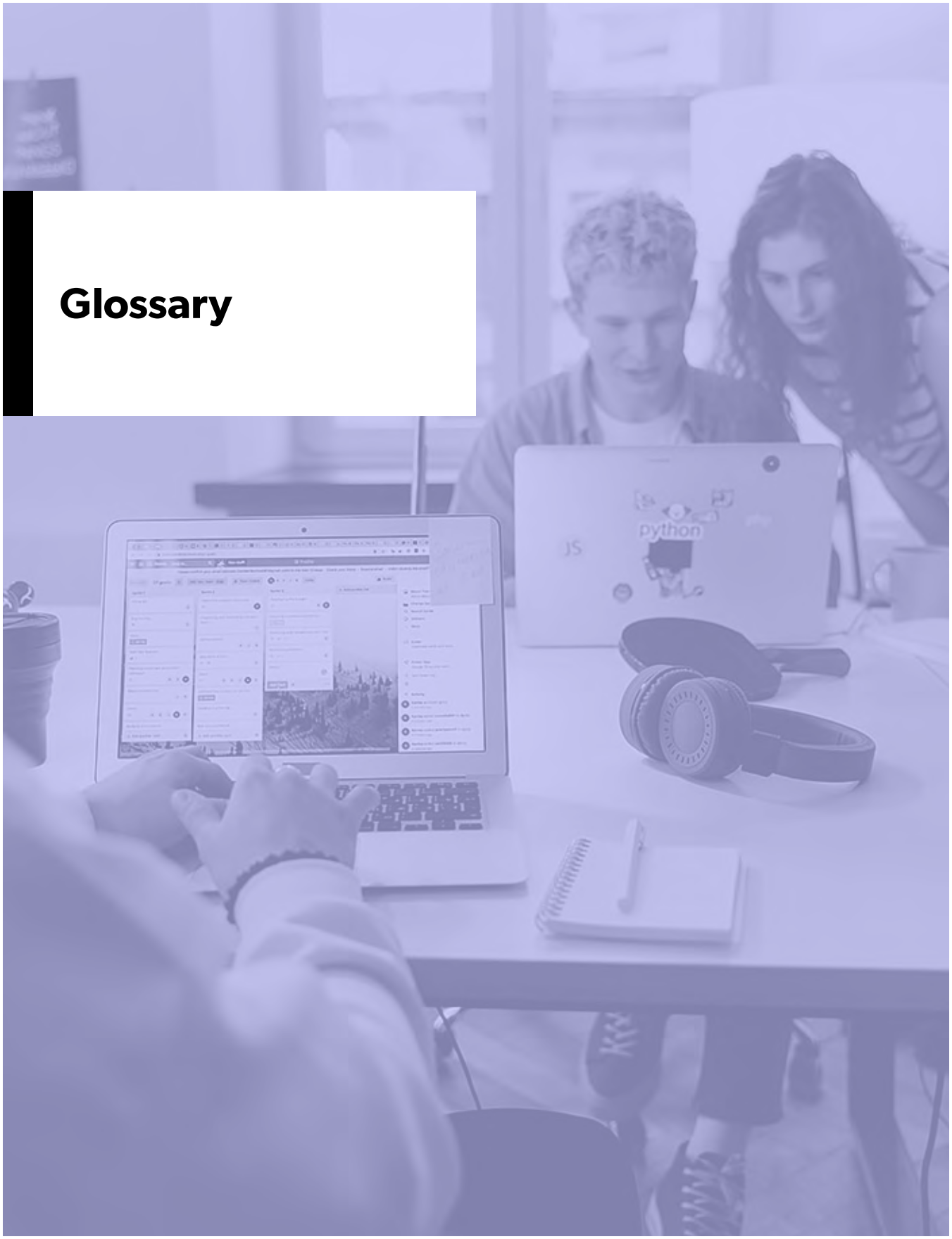
Consider relevant government processes and requirements:

8. Do you have buy-in and support from senior leadership in your organization? If not, what opportunities and risks might this present?
9. Might working on this project require security clearance or access to sensitive information?
10. Are you trying to work around any government processes or requirements by working with civic tech? If so, proceed with caution.
11. Are there any internal government processes or requirements that might be barriers to working with civic tech on solving this problem? Might those be mitigated?
12. Are there existing processes or systems that may be out of scope for this project, but that this project would need to connect with to be successful in the long-term? If so, how will you ensure those connections can be made?
13. Would compensation be appropriate for all or some of the civic tech contributors? If so, what vehicles do you have to provide that compensation?
14. Are there any other potential issues to consider, like intellectual property or collective agreements?

Evaluate your capacity to prioritize civic tech contributors' needs and motivations:

15. Do you already have, or are you willing to invest in building, lasting relationships with civic tech contributors? Including identifying a consistent point-person on both sides and developing an understanding of civic tech contributors' motivations, strengths, and limitations.
16. Are you willing and able to invest in supporting a community of volunteer contributors? Including managing high turnover and navigating the balance between volunteer interests and project needs.
17. How will you ensure continuity of the project through potential turnover, on both the government and civic tech sides?
18. Do you have the capacity and willingness to help civic tech contributors understand and navigate relevant government priorities, processes, requirements, and constraints?
19. Civic tech meetings and work can sometimes happen outside 9-5, Monday-Friday working hours. Do you have staff that can regularly participate at these times?
20. How will you recognize the contributions of civic tech volunteers?

Glossary



Source: Pexels

Agile software development

An iterative approach to creating software products based on quickly releasing a minimum viable product (MVP) and then continually and frequently adjusting it, based on user behaviour and feedback. (Agile Alliance, Red Hat, Krusche & Company)

Assistive technology

Any item, piece of equipment, software program, or product system that is used to increase, maintain, or improve the functional capabilities of persons with disabilities. Assistive technology helps people who have difficulty speaking, typing, writing, remembering, pointing, seeing, hearing, learning, walking, and many other things. Examples of assistive technologies related to digital services include screen readers and specialized keyboards. (Assistive Technology Industry Association)

Civic tech

See What is Civic Tech?

Civic tech group

More than one person working together on one or more civic tech projects, typically as volunteers. Groups may range from informal and ad-hoc collaborations, to more formally structured groups such as Civic Tech Fredericton or Vaccine Hunters Canada.

Civic tech volunteer

An individual contributing to civic tech projects without receiving financial compensation.

Civic user testing group

Representative samples of residents in particular areas, who sign up to participate in usability tests of digital products or services. Civic user testing groups are often housed in a local nonprofit and can be engaged by governments, businesses, or other organizations for planning, recruitment, and facilitation of user testing. This model started in Chicago with the Civic User Testing (CUT) Group facilitated by the nonprofit CityTech and expanded from there.

Hackathon

An event in which computer programmers collaborate intensively with one another, and sometimes with people in other specialties, over a relatively short period of time to create code, usually for a new software product or service. (Merriam-Webster)

Hacknight

A common term in civic tech communities for a meeting that takes place on a regular basis. Hacknights are usually open to anyone to attend, and often include both a speaker and time for attendees to work together on civic tech projects.

Open data

Structured data that is machine-readable, freely shared, used and built on without restrictions. (House of Commons Canada)

Open government

A governing culture that fosters greater openness and accountability, enhances citizen participation in policymaking and service design, and creates a more efficient and responsive government. (Government of Canada)

Source: Unsplash

Open source

Open source originally referred to open source software, which is code that is available for others to view, copy, or modify online. Open source software is developed in a public, decentralized, and collaborative way, through peer review and community production.

The term open source now often refers to a way of working that reaches beyond software production, when the values and decentralized production model of open source software are used to find new ways to solve problems in people's communities and industries. (Canadian Digital Service, Open Source Initiative, Red Hat)

Responsive design

An approach to web design that aims to make web pages render well on a variety of devices and window or screen sizes (eg. desktop, laptop, mobile phone) to ensure usability. (Nielsen Norman Group)

Scrape data

Use a technology to extract data from a particular codebase or program. (Technopedia)

User-centered design

An iterative design process in which designers focus on the users and their needs. User-centered design involves users throughout the design and development life-cycle of a product or service, using a variety of research and design techniques, in order to create highly usable and accessible products. (Interaction Design Foundation, Usability.gov)

Wireframe

A wireframe is a two-dimensional visual representation of a web page, app interface, or product layout. Wireframes are commonly used early in the development process, to establish the basic structure before visual design and content is added. (ExperienceUX, ProductPlan)

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Appendix: Detailed research methodology

Source: Freepik

This report was informed by a literature review and 27 semi-structured interviews between September 2021 and December 2022. This research focused primarily on civic tech initiatives that aim to improve people's experiences with government service delivery, in keeping with the Canadian Digital Service's mandate to help federal public servants deliver better government services.

The literature review focused primarily on English-language academic publications and grey literature, mostly from Canada, the United States, and the United Kingdom.

The intention of the interviews was to gather participant perspectives on, and motivations for, working on civic tech projects or with civic tech groups, with a focus on projects that involved partnerships between civic tech groups and governments. Potential interviewees were identified through civic tech websites and related organizations, and by snowball sampling. Interviewees were eligible for inclusion if they had experience working on at least one civic tech project as a contributor and/or as a government partner, and priority was given to people with Canadian experience.

About the interviewees

- 41 potential interviewees were approached by email and 27 agreed to be interviewed.
- 9 interviewees had experience only as civic tech contributors, 9 had experience only as government staff, and 9 had experience as both.
- Of the interviewees who were current or former government employees, 13 worked with the federal Government of Canada, 1 worked with a provincial government, and 4 worked with a municipal government.

Organizations represented by interviewees

Organization	Number of interviewees with experience in this organization*
Government of Canada	13
Civic Tech Fredericton	3
Civic Tech Toronto	3
Code for Canada	3
Ottawa Civic Tech	3
City of Calgary	2
City of Toronto	2
Civic Tech YYC	2
Civic Tech Field Guide	1
Government of New Brunswick	1
Ottwatch	1
Vaccine Hunters Canada	1
Vaccine Ontario	1

** Total is greater than 27 because many people had experience with more than one organization.*

Participants were asked semi-structured, open-ended questions and space was made for the conversation to progress naturally so other insights could emerge. Aside from case study-specific interviews, interviewees were asked the relevant interview questions from the list(s) below:

Civic tech interview questions	Government interview questions
1. What motivates you to work on civic tech initiatives? How do you decide what issues/challenges to tackle?	1. Have you encountered civic tech initiatives before, either in your professional or personal life? - If **yes**, tell me more about that experience. - If **no**, what are your thoughts about government departments collaborating with civic tech initiatives?
2. Have you worked with government departments or agencies on civic tech initiatives? - If **yes**, tell me more about that experience. - If **no**, why not?	2. If you were deciding if and how to collaborate with a civic tech initiative, what would be your top questions or considerations?
3. Do you think more civic tech initiatives should collaborate with government agencies? Why or why not?	3. Do you think more government agencies should collaborate with civic tech initiatives? Why or why not?
4. If you were deciding if and how to collaborate with government, what would be your top questions or considerations?	

Limitations:

- The sample size of 27 is too small to draw conclusions about broad or historic trends. The number of interviewees was limited by the capacity of the researcher and time.
- Outreach and interviews were only conducted in English, resulting in a lack of insights from Francophone civic tech communities and public servants.
- CDS was unable to find data about the demographics of civic tech contributors in Canada, which meant that there would be no way to know if the people interviewed for this research were a representative sample. As a result, CDS decided not to collect demographic information about interviewees. However, this decision also led to a lack of information about the interviewees that likely influences their experiences, such as gender, education levels, employment, and household income.

Annex: A short origin story of civic tech

Source: Pexels

2000s: Mashups, open government, and code brigades

While some histories of civic tech position the start of the movement in the 1990s, when the internet became something that everyday people could write and create, it was not until the 2000s that what are now called "civic tech" projects began to emerge at scale worldwide.

The 2000s was "the golden age of maps and app mashups," a driving force in the development of what would become the civic tech movement. A landmark example was the 2007 creation of Ushahidi: an online, open-source, crowdsourcing platform that lets people submit news reports using computers or mobile phones, and then creates a map from those reports that can be accessed online. Ushahidi was initially developed as a means of crowdsourcing and mapping reports of violence in the wake of Kenya's 2007 presidential election. It was a technological breakthrough, as digital tools were only just starting to be used to organize participatory responses to crises. Ushahidi turned this emergent practice into an open-source platform solution, which influenced civic tech worldwide. The platform continues to be used around the world today to collect, manage, and analyze crowdsourced information related to diverse issues including crisis response, election monitoring, and good governance.

Two other connected movements evolving during this decade also brought ideas, ways of working, and people together to shape early civic tech communities. The open data and open government movements both gained significant momentum in the 2000s, and civic tech had close ties to them too. For example, mySociety, a U.K. non-profit focused on using online technologies to enable greater civic participation, was established in 2003; The Sunlight Foundation was founded in 2006, with the goal of increasing government transparency and accountability in the United States; and in the fall of 2008, the first hackathon with open government data, Apps for Democracy, was held in Washington, DC.

Another catalyst that helped shape contemporary civic tech was the creation of Code for America in 2009, and the formation of Code for America Brigades. Code for America's mission is to "build digital tools and services, change policies, and improve programs." From 2012-2023, Code for America Brigades were volunteer group that collaborated with local government and community partners across the United States to build tools to serve the public good. The Brigades' primarily municipal focus was part of what influenced young civic tech communities to focus on tackling issues in their own backyards.

2010s: Growth, formalization, and recognition

The number of grassroots civic tech groups and projects grew rapidly in the 2010s, and an analysis of the Civic Tech Field Guide showed that 2015 saw the most projects launched of any year in the database. More groups also explicitly began to use the term "civic tech" in their organization names, and references to "civic tech" increased markedly starting in 2014/15–along with debates about what the term meant. 2015 was also the year that Canada's first formally organized civic tech group, Civic Tech Toronto, was founded.

Many civic hacking meetups or "hacknights" also launched during this time, often through newly formed civic tech communities. "Hacknight" is a common term in civic tech communities for a meeting that takes place on a regular basis. Hacknights are usually open to anyone to attend, and often include both a speaker and time for attendees to work together on civic tech projects.

Recognition of civic tech as a movement worth paying attention to also increased during this period. Many civic tech related research, books, courses, newsletters, and podcasts were launched, both from within and outside civic tech communities. For example:

- The Knight Foundation's 2013 report, The Emergence of Civic Tech: Investments in a Growing Field, mapped the growth of civic tech and where financial investments were being made. While it was criticized for including commercial sharing economy companies, like AirBnB and Lyft, in its definition of civic tech, the report remains significant as one of the first comprehensive, high-profile analyses of civic tech as a distinct field.
- Microsoft's open source Civic Graph project was described as "an old-world atlas for civic innovation". It crowdsourced a map of civic tech initiatives' funding, data usage, and collaborations to provide one of the first global illustrations of the civic tech movement. The project being led by a major tech company also added to the movement's perceived legitimacy.

During this period, the increasing availability of government open data and emphasis on improving governments' use of technology provided raw materials and encouragement for many civic tech projects. The open data and open government movements also expanded globally, with the formal launch of the multilateral Open Government Partnership (OGP) in 2011. The OGP's membership now consists of 75 countries, including Canada, and 150 local jurisdictions, which each submit an action plan to enhance transparency, accountability, and public participation in government.

Governments worldwide also began to increase their focus on developing or improving digital services, and several established digital service departments. For example, the U.K's Government Digital Service was formed in 2011 and the United States' 18F and US Digital Service were both founded in 2014.


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