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The Opportunity Project for Cities

Report and sprint toolkit

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About the report

This report was compiled following the first iteration of the TOPcities program, an 18-week innovation sprint through which two local governments worked with community and tech partners to develop tools that would address pressing local challenges emerging from COVID-19. The Centre for Public Impact (CPI) is a non-profit organization founded by Boston Consulting Group with the mission to reimagine government to work better for everyone. The Beeck Center for Social Impact + Innovation at Georgetown University reimagines systems for public impact using design, data, and technology. Beeck Center projects test new ways for public and private institutions to leverage data and analytics, digital technologies, and service design to help more people.

CPI and the Beeck Center partnered to launch the TOPcities program, and have developed this joint report to document findings and lessons to inform wider efforts in the field of civic innovation. The TOPcities program was developed with generous support and guidance from the Knight Foundation and Google.org. This report was written by Katie Stenclik, Andrea Mirviss, Rebecca Ierardo, and Katya Abazajian. It was released on August 19, 2021, under a Creative Commons Attribution-ShareAlike license and should be cited as: **"The Opportunity Project for Cities: Lessons from Saint Paul and San José" (2021). Washington, D.C.**

The Centre for Public Impact is a not-for-profit founded by Boston Consulting Group. Believing that governments can and want to do better for people, we work side-by-side with governments—and all those who help them—to reimagine government, and turn ideas into action, to bring about better outcomes for everyone. We champion public servants and other changemakers who are leading this charge and develop the tools and resources they need so we can build the future of government together.

The Beeck Center for Social Impact + Innovation at Georgetown University reimagines systems for public impact using design, data, and technology. Beeck Center projects test new ways for public and private institutions to leverage data and analytics, digital technologies, and service design to help more people.

The John S. and James L. Knight Foundation is a national foundation with strong local roots. We invest in journalism, in the arts and in the success of cities where brothers John S. and James L. Knight once published newspapers. Our goal is to foster informed and engaged communities, which we believe are essential for a healthy democracy.

Google.org, Google's philanthropy, supports nonprofits that address humanitarian issues and apply scalable, data-driven innovation to solving the world's biggest challenges. We accelerate their progress by connecting them with a unique blend of support that includes funding, products, and technical expertise from Google volunteers. We engage with these believers-turned-doers who make a significant impact on the communities they represent, and whose work has the potential to produce meaningful change. We want a world that works for everyone—and we believe technology and innovation can move the needle.

Introduction

There is a common paradox in local government: troves of public data, increasingly complex challenges, and mismatched capacities to use the former to address the latter. But public servants working in local government know that it is a tall order to find effective and impactful uses for public data when targeting their communities' most pressing challenges. Adding to this challenge is the fact that local civic innovation is often contained to the work of innovation teams or other technical departments that have the skills required to run design sprints and manage products that make up cities' technical or data infrastructure. This can limit broader access to key innovation skills and approaches that are necessary for helping public servants creatively respond to the multi-faceted challenges of today.

The need and potential to address governments' innovation and digital capacity has never been greater. Due to COVID-19, communities across the country are struggling with job, housing, and food security, alongside other challenges that hinge on equitable access to digital services. In the past year and a half of responding to a global pandemic, local governments have had to take on greater responsibilities with fewer resources.

It's time for local governments to get creative. Local governments have been innovating quickly and demonstrating their ability to shift internal culture and policies to match residents' needs for more responsive, equitable, and data-informed governing. But they have room to grow, and they cannot do so alone. In order to nimbly respond to the "new normal," governments need to partner with community members who best understand local challenges and technologists who can help them deliver on their missions.

This is why we developed the TOPcities model. Designed after the federal initiative, The Opportunity Project, TOPcities is a program dedicated to developing local government's capacity to partner with communities in order to address local problems using digital innovation. While the inaugural TOPcities cohort focused on COVID-19 related challenges in two cities, Saint Paul, MN, and San José, CA, our hope is that local governments in rural communities, towns, and cities of all sizes will adopt the TOPcities model to leverage the power of their communities.

Our story: designing TOPcities

In 2020, the Centre for Public Impact (CPI) and the Beeck Center for Social Impact + Innovation at Georgetown University partnered to launch a pilot program, The Opportunity Project for Cities (TOPcities). We designed TOPcities to help local governments develop the skills to become more adaptive, collaborative, and creative as they navigate challenges resulting from the COVID-19 pandemic. In doing so, we sought to help them leverage these newfound capacities to address local problems using technology and turn important, underutilized government data into tools for public good.

The overall structure and approach of TOPcities was inspired by the U.S. Census Bureau's The Opportunity Project (TOP), which brings together cross-sectoral organizations to leverage federal data to create new technologies. Launched in March 2016 as a White House initiative, TOP has culminated in more than 100 products that translate federal data to useful public tools. TOPcities would not have been possible without the excellent foundation the federal team developed, and we can't thank them enough for their gracious support and guidance throughout this process.

In transitioning the federal TOP model to the local level, our goals were to:

1. Help governments partner with community organizations to develop accessible and innovative minimum viable products (MVPs) that respond to COVID-related challenges.
2. Develop the capacity of public servants to:
   a. Adopt new strategies for innovation that are oriented around listening, learning, and collaborating with community stakeholders.
   b. Strengthen capacity to design equitable digital services and apply open data.
3. Build pathways for technologists and communities to participate in local civic innovation projects, including by documenting effective strategies for cross-sector collaboration.
4. Create a learning network to share best practices across sprint teams and with other local governments more broadly.

In order to achieve these goals, sprint teams used best practices from human-centered design (HCD) and open data. HCD is a method for solving problems that is rooted in learning from people's daily experiences. HCD is a core feature of the TOP model because it provides tools for public servants to understand resident experiences and center them when making decisions.

Another core feature of the TOP model is open data. Public servants need support to apply underutilized public data that could be used to solve public challenges if the data is shared in ways that inform residents or help them to find the services they need. City governments leverage available public data - primarily open data or information that is shared freely and maintained for public use - to develop innovative technical solutions that meet residents' needs.

When we adapted TOPcities to meet the local context, we supplemented the original TOP model with intensive coaching and training to help our local government partners deepen their collaborations with technologists and local community organizations. Hands-on support was essential to ensure that local government staff participating in the sprint had the capacity to manage sprints in addition to their myriad responsibilities as frontline staff responding to the effects of COVID-19. By operating TOPcities, we sought to improve each government's understanding of its own available data, create opportunities to strengthen data quality, and democratize access to government information.

The TOPcities model helps public servants adopt new ways of analyzing and addressing systemic challenges, collaborating across sectors, engaging with residents, and leveraging public data to develop impactful solutions. Our inaugural TOPcities sprint provides several lessons on the value of helping governments develop new approaches that center communities as they respond to modern challenges.

The first sprint

The first TOPcities sprint launched in February 2021 with two U.S. cities: San José, CA, and Saint Paul, MN. Each city formed cross-sector teams that included municipal employees, technologists from Google.org, and local community partners - Catholic Charities of Santa Clara County in San José and M Health Fairview in Saint Paul. Over the course of four months, the teams engaged in a product design sprint comprised of three main parts: understanding the problem by engaging with community members and other key stakeholders; developing a product to address the problem; and launching a product for public use. Our TOPcities toolkit provides a more detailed description of how this program works in practice so that local governments can replicate TOPcities sprints on their own.

City team: public servants who convene the team to understand and develop a product to address a community challenge

Technologist: designers, engineers, and data scientists that build the product

Community team: a local community-based organization that centers resident needs and perspectives to ensure the product meets community needs

Support: sprint program management and coaching supported by CPI; product advising supported by Beeck and independently contracted civic technologists

For this inaugural sprint, both teams focused on addressing housing challenges that were exacerbated by COVID-19. In San José, the sprint team focused on strategies to prevent residents from being evicted due to inability to pay rent. In Saint Paul, the sprint team sought to improve access to services for residents experiencing homelessness. The sprint teams engaged with more than 100 residents, service providers, and public servants across the two cities to learn more about their respective challenges and get feedback on the products they designed to address them. By the end of their sprints, both San José and Saint Paul developed prototypes that are designed based on resident needs and that leverage data and technology to address local challenges. The rest of this section describes how each city addressed its problem through the sprint and lessons learned.

Case study: preventing evictions in San José, CA

The problem

In the wake of COVID-19, thousands of San José residents have relied on government eviction moratoria to avoid eviction due to inability to pay rent. Despite this temporary relief, the end of the moratoria will require residents to provide months of back rent to their landlords, or else face losing their homes. According to a July 2020 study from Working Partnerships USA and the Law Foundation of Silicon Valley, this challenge is particularly acute for "people of color, women-headed households, and families with young children" in San José. In order to mitigate the risk of mass evictions, city, county, state, and federal aid is available to renters and landlords to make up for months of lost payments. As such, the San José sprint team looked to public data and the community to seek answers to two central questions: **how much aid would need to be distributed to residents, and how could the City ensure that San José residents receive the assistance they need?**

The team

The San José sprint team consisted of representatives from the City of San José's Rent Stabilization Program, Catholic Charities of Santa Clara County (Catholic Charities), and Google.org. The team was also coached by expert civic technology advisor, Alicia Rouault, co-director of State and Local Practice at 18F.

City staff from the Rent Stabilization Program contributed topic-based expertise and helped the team navigate San José's complex political ecosystem. As the community partner, Catholic Charities represented the community perspective throughout the sprint and helped the sprint team get feedback from service providers and residents during user research and product development. The City partnered with Catholic Charities for the sprint due to their deep community relationships and expertise in collaborating with the City to provide direct support, such as food and rental assistance, to residents experiencing financial hardship. CPI and the Beeck Center helped the sprint team connect with Alicia Rouault as a product advisor because of her expertise in civic technology and experience working on state and local tech initiatives at a national level. Additionally, Google.org contributed product managers, engineers, data scientists, and user experience designers to support with community research, product brainstorming, technical assistance, and product development.

The sprint

Problem understanding

At the start of the sprint, the San José sprint team followed the City's guidance that the best way to help residents relying on the eviction moratoria would be to better measure the "eviction cliff." The "eviction cliff" is defined as the number of households that are at risk of eviction due to inability to pay rent once the moratoria are lifted. This guidance was rooted in the assumption that calculating this "eviction cliff" would help the City to better allocate resources and target funding to those who needed it most.

To better understand this problem, the sprint team took a two-pronged approach. First, the sprint team set out to find public data that could help them to identify which residents would be most at risk of eviction when the moratoria ended, and then estimate the magnitude of back-rent owed by these residents. The City began compiling data from eviction notices submitted by landlords but soon realized this information was either out of date or incomplete. Landlords had fallen behind on filing eviction notices with the City because they were unable to evict tenants during the moratoria. Second, the sprint team interviewed City officials, community leaders, landlords, and tenant organizers to learn from their experiences with this challenge. In partnership with Catholic Charities, they also surveyed 38 residents experiencing economic distress at local food banks over three days.

"Understand your community. Do that research. If you don't understand your community, if you're not hearing from your community, if you're not centering your vulnerable community, then that is going to have humongous ripple effects."

Guadalupe Gonzalez
Rent Stabilization Program Analyst
City of San José

The insights from this research process ultimately shifted the sprint team's project focus. The team discovered that even if they identified the individuals most in need of aid, they would struggle to get this aid into those residents' hands. Further, there were serious barriers preventing residents from accessing rental aid that could help them avoid eviction in the first place. A deeper analysis of this key realization and three important insights about San José's rental assistance landscape follows:

1. **The rental assistance process is arduous, confusing, and emotionally taxing. Many don't know how to get help or cannot access it due to technology constraints**. Even for those who have access to technology and the skillsets to use it, the existing rental assistance process is deeply complex. The resident application alone is 37 pages long, and there are often linguistic barriers for San José's non-English speaking residents, as the technical nature of the application can be difficult to translate clearly. The sprint team also learned that even if tenants or landlords completed this arduous application, they have no way to track their application's status, which can be discouraging and stressful. One landlord shared, "It's a complicated process. It requires tenants to respond and provide documentation. If they don't respond and provide documentation, they don't know if they get their money back." Many give up in the face of the sheer magnitude and complexity of paperwork they must provide to get assistance.

   Many residents who need aid cannot access this complicated system even if they want to: according to a city council member, 20 percent of residents who would apply for relief don't have reliable internet access. These populations rely on phone or in-person resources when seeking services, or use the web through a proxy - such as Catholic Charities or a public library - many of which have been inaccessible due to pandemic restrictions. In addition to digital access barriers, the sprint team also discovered a major information gap. In some cases, residents did not even know that rental assistance was available or that they were eligible.

"The research phase of TOPcities really honed in on the fact that people need information, that there's a lack of information, and we need to understand what information we can get out right now."

Guadalupe Gonzalez
Rent Stabilization Program Analyst, City of San José

2. **Many tenants and landlords do not trust the government to provide assistance**. Widespread mistrust of government meant that most residents were either unaware of or disinclined to seek out municipal resources. One service provider shared in their interview that many residents "don't trust government sites, the government in general, or anything that asks them to upload personal information online." By contrast, a city council member shared that community organizations were already accepted as a trusted voice of truth, that "the best way to reach [the most vulnerable] is through community partners like Catholic Charities or Sacred Heart. They are more likely to trust those who have a physical presence in their communities and those who can speak their language."

3. **Facing increasing demand and a complex system, community organizations struggle to meet needs**. Interviews with community organizations pointed to staff shortages and limited technical capacities, which diminished their ability to administer rental assistance in a time-efficient way. One service provider shared, "When the City launched DIRA [an aid program set up by Governor Newsom to give $500 to undocumented immigrants, we were], getting 4,000 calls a day for help. It crashed our system and we couldn't even take all the calls

and had to replace our system." Due to increased need and COVID-19 precautions, most service providers, including Catholic Charities, are requiring residents to make appointments to get help with their rental assistance application and no longer offer walk-ins, which can also be a barrier to accessing assistance. Staff from Catholic Charities estimated that each application takes roughly 2 to 4 hours and about 2 to 3 separate appointments to complete. Catholic Charities and other service providers spent a lot of this time helping residents understand their eligibility, find documentation they need for their application, and assess which ID requirements residents could meet to file the application.

Based on the needs exposed by the community research process, the sprint team shifted their problem focus from measuring the eviction cliff to making the process of applying for rental assistance more transparent and accessible.

"Originally, our program was focused on how to quantify the eviction cliff. We knew this big problem was growing by the day, and we wanted to actually put a number on it to see what would be required to address it properly. What was helpful with TOPcities was that it went beyond just a number to consider what solution can be put in place to actually alleviate the problem - what would improve the situation for all these people who are potentially going to be evicted?

Fred Tran
Rent Stabilization Division Manager
City of San José

They also shifted their data collection away from the magnitude of back rent owed by residents, because, as one City staff member shared, when "they focus on notices of eviction … that means they miss people. People can be harassed, or asked verbally to leave." The sprint team expanded their search to other data that might better meet the needs of their residents, such as existing resources for housing support services. As a result of this process, the team reconfigured their problem statement to focus on the following question: **How might we improve the process of finding and obtaining rental assistance for tenants and landlords?** Answering this question would get aid into the hands of residents sooner, thereby helping more residents avoid eviction.

Product development

To address San José's rental assistance challenge, the sprint team decided to create a tool that would make it easier to get funds into the hands of tenants and landlords that needed it most. The

team explored three potential options that would do so. First, the sprint team considered creating a one-page application or a text-based portal to streamline the process of applying to both State and local rental assistance. Second, they considered adding features to the State's current assistance application, such as allowing residents to request documentation or information directly from their landlord, or to electronically ask family or friends for help with finding documentation. Finally, they brainstormed an approach that would compile all relevant City and State rental assistance resources and share essential information that could help tenants and landlords apply for rental assistance.

The team vetted the feasibility of these three options by speaking with State and City stakeholders. The State assistance program declined to share the code base that would have allowed the team to add in features to their application process and streamline the process for renters and landlords. Given these limitations, and the positive feedback from City and community stakeholders, the team ultimately moved forward with the third idea: publishing relevant information about how to apply to State and City rental assistance.

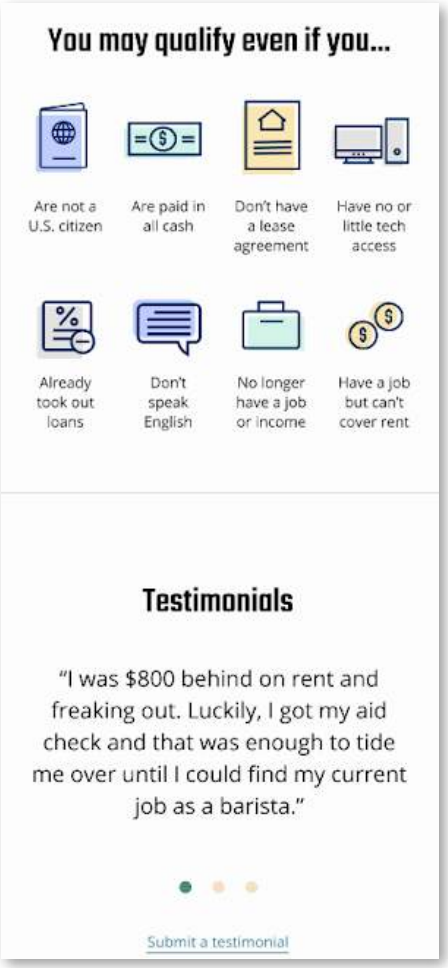
Considering that the research revealed widespread government distrust, confusion about filling out the applications, and a significant digital divide, the team decided that simply adding another digital tool would not be enough to help at-risk residents receive rental assistance. To truly meet the residents of San José where they are, the digital tool needed to be supplemented with in-person support from organizations that residents would trust. Accordingly, the City and Catholic Charities set up pilot pop-up eviction help centers at trusted community locations. Residents could walk in and receive targeted support with their application from Catholic Charities workers. The sprint team then set about compiling data on the locations of these pop-ups so that the digital tool could direct residents to their nearest pop-up location should they require in-person support as they navigated the rental assistance process.

This exploration process took slightly longer than expected and ultimately shortened the team's time for user testing with the product. However, this due diligence saved time and resources in the long run: rather than building a tool that would be incomplete due to struggles to coordinate with the State, they pivoted to a solution that would meet residents' needs for a mix of digital and in-person support while sharing public information about the rental assistance process.

Product launch

Ultimately, San José developed a City-owned, community co-branded Rental Assistance Finder that makes the emergency rental assistance process easier to understand and highlights community resources that can help to meet additional resident needs. This tool provides an estimate of the rental assistance that residents can expect after applying for aid and publishes data on the locations of in-person pop-up resources run by Catholic Charities to help residents apply. Notably, the Rental Assistance Finder goes beyond simply compiling open data on available rental assistance resources; it also directs people to the aid that is most appropriate for them based on their responses to questions regarding employment, residence, and the documentation and identification they have available. Upon entry, the page directs users (either tenants or landlords) through a short questionnaire that calculates the estimated total aid they may qualify for and highlights specific additional in-kind services that may be helpful. The page also directs users to a

nearby popup, enables them to make an appointment, and notes which documents they need to bring to expedite the process. The Rental Assistance Finder will be accessible from both the City's and Catholic Charities' websites.



In developing the Rental Assistance Finder, the sprint team leveraged existing code from New York State's "Find Services" tool, an open-source product developed with support from Google.org Fellows that helps residents find social services and benefits in New York State. This codebase enabled them to start further along in the development process and ultimately include a more robust suite of features than they would have otherwise been able to within the time constraints of the sprint.

Given the magnitude of the digital divide in San José and the broad distrust of government in some communities, the team anticipates that not all residents requiring aid will use the tool. The team expects that the Resource Page will spark word-of-mouth uptake in rental assistance more broadly and is addressing the digital divide barrier by offering in-person support. After launch, the tool will be shared with frontline staff at more than 47 community organizations who support the delivery of rental assistance, starting with Catholic Charities, so they can use the tool to support residents on the ground.

Key takeaways

The sprint experience in San José yielded many helpful lessons for public servants seeking to develop new programs and tools to address housing-related challenges:

1. **Acknowledge constituents' distrust, and work with residents to improve trust in government services**. Instead of ignoring or dismissing sentiments of distrust around government-provided-rental assistance, the sprint team worked to ensure that even those who are skeptical of the government would feel comfortable using the prototype to access aid. With Catholic Charities leading the design of in-person support services, the sprint team designed the product to direct residents to trusted or neutral intermediaries, such as service providers. With Catholic Charities' design feedback, the team also ensured service providers could use the product themselves. Further, in an effort to reduce resident hesitancy around usage, the team decided to co-brand the resource with both the City and Catholic Charities, change the website's colors, and add accessible visuals so the tool feels less like a standard San José government website.

"By strengthening our partnership with Catholic Charities, we're starting to build that trust. We have to start understanding that as a city government, there are areas that we do well and there are areas that Catholic Charities does well. By working together in a project like TOPcities, it shows the community not only can we work together well, we are building up that rapport, building up that trust together."

Guadalupe Gonzalez
Rent Stabilization Program Analyst, City of San José

2. **Data challenges can be unpredictable, which makes it important to identify what information is valuable to residents early on**. Data on rental assistance often crosses jurisdictions, creating barriers in data access. Despite the fact that the sprint team heard from residents that disparate City and State application processes were a key barrier to accessing rental assistance, they could not access the State's data to analyze assistance delivery times or other key information about the application and delivery process. This limited the prototypes they could ultimately develop. If they had known this in advance, they might have considered additional city data sources beyond information on in-kind services and pop-up centers. As such, the tool highlights data on the locations of in-person pop-up centers for assistance.

2. **Digital solutions should be complemented by in-person resources on housing when they are more helpful**. The sprint team discovered that residents at risk of eviction are less

likely to have reliable internet access, making it harder to obtain assistance and other important resources. One of San José's core goals for its product was to ensure that residents most at risk of eviction were able to benefit from the Resource Page. With that said, the tool they ultimately developed requires a considerable amount of digital literacy and access to technology, which many of those most in need did not have. To compensate for this, the sprint team designed the tool so it could also complement in-person assistance efforts, including directing residents to their nearest rental assistance pop-up to complete an application and providing phone numbers for key service providers in their area. As the product owner, the City team is sharing the tool with all community organizations that support the rental assistance programs within the City. Service providers are also being trained to use the tool with walk-in clients.

"During ideation, we realized it's important to have not just the technology, but the staff and the available people offering support. That actually worked out great because of how we've been able to partner with Catholic Charities on the Eviction Help Center, and we're working with them on their eviction pop-ups as well. We were able to collateralize that relationship so that there is an automatic impact."

Fred Tran

Rent Stabilization Division Manager, City of San José

Case study: supporting unsheltered residents in Saint Paul, MN

The problem

Since the start of COVID-19, there has been a tenfold increase in the number of residents experiencing homelessness in Saint Paul. The increase in the unsheltered population and the limited non-profit serving capacity due to social distancing requirements have placed a tremendous strain on the system. As a result, Saint Paul's unsheltered residents have struggled to access essential resources like shelter, counseling, and other important services. Making matters worse was the harsh cold weather this winter, which contributed to frostbite and encampment fires as a result of unsheltered residents using propane tanks for heat.

Worried about the well-being and safety of unsheltered residents, the Saint Paul sprint team decided to use the sprint to explore the following question: **How might the City of Saint Paul and Heading Home Ramsey support providers, the public, and residents experiencing homelessness to connect with services they need at the time they are ready to access those services?**

The team

The Saint Paul sprint team included the City of Saint Paul, M Health Fairview, Google.org, and independent product advising from civic tech expert Noah Kunin, Chief Information Security Officer at U.Group. Public servants from diverse City departments engaged in the process, including staff from the Mayor's Office, Digital Services, Safety & Inspections, and Innovation teams, which allowed for a rich mix of cross-city perspectives and expertise in the process.

As the community partner, M Health Fairview offered staff from their leadership, data, and patient care teams to provide deep insights on serving unsheltered clients. The City selected M Health Fairview for the sprint after partnering with them through the Heading Home Ramsey Continuum of Care, the County's system for providing services to unsheltered residents. The CPI and Beeck teams connected the sprint team to product advising support from Noah Kunin who brought civic technology expertise and experience with product development at multiple levels of government, including in the state of Minnesota. Additionally, Google.org contributed product managers, engineers, data scientists, and user experience designers to support with community research, product brainstorming, technical assistance, and product development.

The sprint team had multiple touchpoints with community partners in the Heading Home Ramsey community, a regional coalition that brings together "social service providers, housing providers, philanthropic partners, business, community, government, and citizens working together to create and implement cost-effective solutions to ending homelessness." This partnership played an advisory role and helped the sprint team connect with residents for feedback.

The sprint

Problem understanding

To better understand this problem, the sprint team evaluated existing public data on services for unsheltered residents to identify opportunities to publish information that would help these residents and service providers. The team interviewed 30 service providers and unsheltered residents to learn more about the experiences and challenges facing these residents and the people who serve them.

> *For city staff to have that aha moment and think about 'Maybe I haven't been listening in the way I thought I was listening.' We put ourselves in that expert role and so often in government we do that when we're behind the counter serving people. This breaks down when we go through the community research process. We say, 'I'm going to acknowledge in this moment and this interview that I'm not the expert and that you are, and I'm going to ask you about your experience, and you tell me what I don't know.' That's so powerful. Because we think we know, until we hear how people experience it through their eyes or we observe them or we ask them to walk us through it.*
>
> Rachel Walch
> Innovation Consultant
> Office of the Mayor, City of Saint Paul

The team also received input from additional service providers by hosting a focus group and using a survey in order to better understand different barriers and opportunities within the service delivery system. These interviews helped the team to better understand some of the barriers that unsheltered residents experience, exposing which points in the journey to housing could benefit from technical intervention. The research process produced these top insights:

1. **Residents desire greater autonomy to access services related to their specific needs**. So much of the service delivery system involved variables that were outside of the residents' control, such as requiring a referral from a caseworker to access a particular shelter or waiting for the approval of a government assistance application. Residents emphasized that barriers to accessing services and aid made them feel like they didn't have control over their own lives.

   Service providers similarly cited barriers to autonomy as a concern: "There is no direct line for clients to call to access [certain] programs even if they are eligible." Service providers felt frustrated that they were sometimes forced to serve as gatekeepers to accessing services when

so many residents urgently needed help. The referral process also made it hard to prioritize the residents who needed greater hands-on support to navigate the system. One service provider shared that because of the referral system, "We spend a lot of time and resources doing work with someone who may be perfectly capable of doing that on their own."

2. **Having a decentralized system makes it difficult for residents to know where to go for services**. Residents shared that they didn't always know where to go to receive help for their specific needs. Further, when they found a service they wanted, they sometimes were denied assistance because they didn't meet eligibility requirements. As one of our sprint team members observed: "People have to navigate several different systems, and it's hard to understand their eligibility. This makes identifying and accessing resources challenging and can demoralize [people]. This keeps folks from seeking and accessing the support they want."

   Service providers similarly shared that they also weren't always aware of the full spectrum of services available. Even when they learned about a new service, they were hesitant to refer clients to the agency if they couldn't personally vouch for the service itself. As one service provider shared, "I don't like to send someone somewhere to something I haven't experienced. If I didn't feel like I wanted to go there, I wouldn't send someone there."

3. **Residents do not have access to real-time information on service availability, which can have dire consequences**. By interviewing residents and service providers and examining available local data on homelessness rates and services, the team discovered a number of barriers. They realized that data relating to homelessness was often siloed and inaccessible. It was also difficult to find accurate real-time data on service availability. Not having access to real-time information on service availability can have significant consequences for residents. As one of our City team members shared: "Accurate information for [residents] is critical to identifying and aligning timely services to meet their needs. [Residents] are frustrated/ill-informed because they do not have complete/real-time access to information. This may result in a [resident] making a misinformed and life/safety related decision."

By engaging in a robust problem-scoping process, the team realized that any solution they designed must promote autonomy for unsheltered residents, remove bottlenecks in service delivery, centralize service information, and increase publicly available data on services. The process helped to increase representation of the community's voice and developed the City and community partner's capacity to engage with community members and social service providers when developing future programs. With this, the sprint team moved forward with their original problem statement: How might the City of Saint Paul and Heading Home Ramsey support providers, the public, and residents experiencing homelessness to connect with services they need at the time they are ready to access those services?

Product development

After processing research insights and conducting a series of collaborative brainstorming sessions, the sprint team decided to develop a centralized resource hub that makes it easier for residents experiencing homelessness to discover and access information on essential short-term services in their community, such as low-barrier shelter beds, lockers, meals, and laundry. Low-barrier shelter beds were of particular interest for the sprint team, given that more accurate and real-time information on bed availability could increase residents' ability to independently and preemptively plan where they would prefer to stay overnight.

The team initially began drawing out ideas for this tool but came to realize that there was a pre-existing tool, ShelterApp, that might be able to meet their needs. ShelterApp already offered information on the locations of shelters and other essential services, public transit directions to services based on an individual's specific location, as well as hours and contact information for services. It just needed to be populated with information from service providers in Saint Paul. Further, ShelterApp agreed to open-source its code using a CreativeCommons BY license, which meant that the team could use the existing codebase to create a version for shelters and key unsheltered services within Saint Paul's city limits.

"It's prompting the question for our IT leadership as well as city leadership around the idea that you can use services and deploy technology tools that aren't yours to own. And that wasn't something that we'd addressed before - working out of an open source codebase collaboratively with a non-profit on that for a tool that we don't own, but we're utilizing for the city to deliver services...This is again that tactile example of we don't own ShelterApp but we're committing to it because there's an important delivery it can drive out.

Drew Nelson
Digital Services Manager
City of Saint Paul

Ultimately the team decided that partnering with ShelterApp would enable them to roll out a better-developed product to the community and would make it possible to scale the open-source product across Ramsey County so other members of Heading Home Ramsey could eventually use it to share information and data about their services. Had they elected to build their own app instead of partnering with ShelterApp, they would have finished the sprint with a less-developed product, higher expenses, and much higher upfront technical needs.

The team tested ShelterApp with service providers and residents and received highly positive feedback. As one service provider summarized, "The biggest win is user accessibility and information without having to go through a 'gatekeeper.'" Based on community feedback, the team developed a set of modifications that would help ShelterApp better fit the needs of the local context. These modifications included app features such as providing photos of shelter spaces, adding in step-by-step directions on how to access a bed upon arriving at a shelter, and building in the app's future capacity to show real-time data on bed availability.

"The TOPcities sprint process really hit the importance of doing the direct interview with the "users", from both the IT and Services perspectives. Working collaboratively with the people who will utilize that service to define what they need and how this will support them was a very impacting experience, and we're building a better product and delivering a better service as a result."

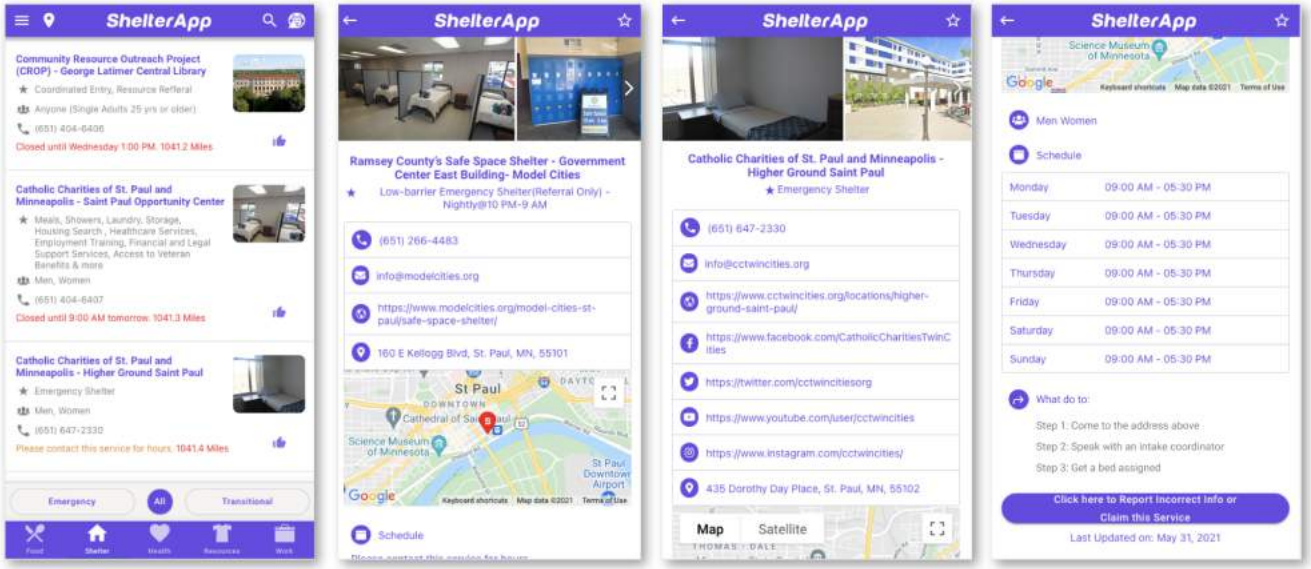
Drew Nelson
Digital Services Manager
City of Saint Paul

These modifications offered a number of benefits to residents. Providing photos of shelter spaces would enable residents to see a space before they showed up, which could help them feel more comfortable with using it. The step-by-step directions on accessing shelters would make it easier for residents to know what they needed to do to get a bed in advance. This could help them avoid frustrations like showing up to a shelter only to learn they were ineligible. At a more systemic level, this feature would also expand publicly available data around the process for accessing beds at different low-barrier shelters. Lastly, enabling residents to see bed availability could help them to better prioritize where to go for shelter. Given that residents were often commuting to shelters by foot or bus, this feature was key for saving them time.

Product launch

When the sprint initially launched, the team wanted to understand how to make it easier for unsheltered residents to connect with essential services at the time they are ready to access those services. The sprint's final product, ShelterApp, provides the foundation for fulfilling that mandate by providing a centralized platform for unsheltered residents to search and learn more about the essential services that they need, whenever they need them. The team hopes that the product will eventually allow residents to book shelter beds from the app, making it easier for residents to ensure they have an indoor place to sleep overnight as desired. As the product owner, the City team is now working on collaborating with Ramsey County in order to expand the app's reach to the County's contracted providers and the rest of Heading Home Ramsey.

While ShelterApp's influence in Saint Paul and Ramsey County remains to be seen, it shows promise for broader impact. As the team noted during the research process, data relating to homelessness was often inaccessible across partners and real-time data on service availability was not publicly available. ShelterApp has the potential to serve as the initial infrastructure for an open data system that improves service delivery and access in Ramsey County. It also provides a foundation for future digital innovation in addressing and reducing homelessness.



"The product that we came up with is addressing a gaping hole, that anyone who has any experience in this work recognizes. There is a major information sharing gap that exists in this space. We don't know who has what, and where they can go, and what services are available. It's a huge investment to solve those things in a one off scenario using staff to do it, vs. having technology triage this work."

Travis Bistodeau
Deputy Director, Department of Safety and Inspections,
City of Saint Paul

Key takeaways

The sprint experience in Saint Paul yielded many helpful lessons for public servants seeking to develop new programs and tools to address housing-related challenges. These ideas are shared below:

1. **Community members are one of government's greatest assets when trying to address housing challenges**. While researching the problem, the team saw that service providers and unsheltered residents were the best resources for understanding systemic barriers and residents' needs. For example, the team originally assumed that they would develop a tool that would make it easier for service providers to help residents seeking shelter. They learned from residents and service providers that any tool the team developed must enable resident autonomy in the process. This major insight caused the team to prioritize developing a tool that anyone could use to discover and access services relating to being unsheltered. Recognizing the immense value of the community's perspective, the sprint team later invited service providers to join sessions to brainstorm design-based solutions and eagerly sought community input when developing the product. This more collaborative approach increases the likelihood that the team's product will meet the needs of residents and those who serve them.

"It's so important for us to understand the unique needs of folks that are trying to navigate the system and why it doesn't work for them. We know the system doesn't work for them, it's been in place for decades and we still have a problem. We can't understand that without talking to people. The problems that people face today are not the same as the problems people faced 5 years ago - so the solutions are going to change over time. We need to be prepared to use processes that allow us to shift and react to the needs of people as they change, and we need to build our resiliency in our systems to allow for that."

Rachel Walch
Innovation Consultant, Office of the Mayor,
City of Saint Paul

2. **Build buy-in from high-level stakeholders early and often**. Homelessness is a complex cross-jurisdictional challenge that requires support from diverse stakeholders. As such, the Saint Paul sprint team benefited from having the deputy mayor and top leadership from M Health Fairview actively engaged in the weekly sprint activities. Frequently engaging with high-level city and community leaders enabled the team to get early internal buy-in for their solution. By the same token, the team experienced the challenge of not engaging with county leaders focused on homelessness early enough in the process. It was important for the team to

get the County onboard because the County is responsible for collecting data on homelessness and distributing funding to service providers. The team later realized that because of these responsibilities, the County was better positioned to serve as the product owner than the City. Engaging high-level stakeholders from the County earlier in the sprint may have made it easier to initiate product ownership conversations with the County.

> *"Having a high-ranking product and issue champion, the Deputy Mayor, who has spent hundreds of hours working on unsheltered homelessness over the past year has been really critical to moving [projects] like this forward. If she wasn't involved, there is a chance this tool wouldn't have gotten off the ground.*
>
> Travis Bistodeau
> Deputy Director, Department of Safety and Inspections
> City of Saint Paul

3. **You don't have to start from scratch when designing innovative housing solutions**. Given that many communities across the United States face housing challenges, it is beneficial to see what other products currently exist before developing a new product from scratch. Saint Paul was able to launch a significantly more developed tool by leveraging a pre-existing app and adapting it to meet local needs. This made the app more immediately usable for unsheltered residents and service providers. In choosing this path forward, it is important to note that the decision to select a pre-existing solution was informed by the team's conversations with residents and service providers during the problem understanding phase. Further, the team didn't simply use ShelterApp; rather, they partnered with ShelterApp to adapt it to the local homelessness context. This meant that the product was better positioned to serve resident needs.

Key lessons

In addition to the key takeaways gained from the sprint teams in San José and Saint Paul, there are broader programmatic lessons that may be helpful for local governments seeking to apply best practices from the TOPcities pilot program:

1. **Governments can adopt new practices quickly without forsaking intentionality**. There is an implicit assumption that moving fast and doing robust community engagement are at odds. The TOPcities program pushes against this assumption by limiting the time government has to understand and address a public challenge. While this does force sprint teams to make decisions much faster, it also encourages iterative engagement with residents over time. In other words, governments can seek out resident input in meaningful but light-touch ways at each stage of the process, thus keeping residents involved while prototypes and projects evolve. Our government partners saw the benefits of this approach, particularly in how it helped them to make quick progress on difficult issues. As one of our sprint participants from San José shared: "Partnering with a community-based organization to center community perspective has been so valuable, and a pleasant surprise has been the speed at which we tackled gaining community survey results. I know this sprint was meant to do just that, but I'm still impressed."

"What the TOPcities process really did was show that working together to solve a problem not only is possible, but it's feasible in a pressurized environment."

Guadalupe Gonzalez
Rent Stabilization Program Analyst, City of San José

2. **Ground yourself in the data that exists, with an eye toward helping to make the data you want available in the future**. One of the greatest challenges for sprint participants was the lack of prepared, clean, or structured data for their projects. In Saint Paul, the team realized that while there was data available on homelessness, it wasn't bulk data that could be easily analyzed to generate insights. After speaking with community residents, teams found that the data they needed was simple information about shelter locations, hours of operation, and visual data like photos of shelters that would help them set expectations about available locations. A Saint Paul City employee emphasized the need for better data in the long run,

sharing that "There is a lot of data that exists but is [not] easily accessible or doesn't measure important outcomes." This realization influenced the Saint Paul sprint team to design a product that would help make initial data about shelter services accessible while driving the Heading Home Ramsey continuum toward a tool that would generate better data in the future.

"You need to think about the long-term maintenance, sustainability, and support of technology solutions. Bringing in service providers to look at the backend of how the app would work and would it be an easy thing for them to support and maintain going forward, is not something I thought about as we were building it up. When building a pilot project I often think about how to get the plane off the ground, but not how to keep it in the air long-term. That's something we thought about on the front-end."

Travis Bistodeau

Deputy Director, Department of Safety and Inspections, City of Saint Paul

3. **Cross-sector collaboration leads to innovation and supports upskilling across sectors**. By bringing together government leaders, community practitioners, and technology experts, team members learned new ways to think about open data, product development, and community engagement. This diversity of perspectives pushed government teams to reevaluate their understanding of the root problem, encouraged technology teams to work within complex political environments, and gave community partners a greater voice in developing tools they would actually use. Fundamentally, it re-shaped the dynamic of cross-sectoral work, moving from a transactional approach where input is simply shared with city decision-makers to a more comprehensive partnership where all parties have an equal opportunity to shape the outcome. This experience taught sprint participants new skillsets in innovation and product development that we expect will be sustained over time. One of our community partner team members summarized the benefits of this approach, sharing that their biggest learning was the "power of bringing a group of people from different sectors together and new approaches to finding solutions."

"What helped me the most was seeing how community-based organizations that do have community trust, that do have that relationship, are able to build upon that, and we are able to leverage them. We may not be able to communicate it directly, but they are. They're able to offer that trust and that relationship from a more solidified standpoint and ultimately that's what gets these people engaged into the process and gets them the resources that they need."

Fred Tran

Rent Stabilization Division Manager, City of San José

4. **A product is rarely the sole solution to an entrenched social issue**. The products developed during a sprint should serve as part of a broader approach to addressing a systemic challenge. The Saint Paul team inspired this insight by deciding to develop the product as a supplemental part of Heading Home Ramsey's comprehensive approach to alleviating homelessness, which involves a longer-term effort to centralize essential data about available services. San José's tool is also part of a broader effort to integrate data across City and community providers so that they can more quickly deliver aid to their communities. Both teams are already planning to transition the tool to serve their overarching, strategic goals when the sprints are over. This foresight illustrates the value of anticipating that these products will evolve over time to meet new resident needs as part of governments' broader strategies in collaboration with their trusted community partners.

"I knew there was going to be culture change involved in the TOPcities sprint, but I didn't anticipate such big system changes needing to happen for the longevity of the tool to operate in the way residents and providers want it to operate, like securing their own bed for the night and real-time communication with providers - that's not only culture change but also systems change. If we want to get to a place where this is possible, which residents and providers said they wanted, we have to change how the system operates and that is going to be challenging."

Rachel Walch
Innovation Consultant, Office of the Mayor, City of Saint Paul

Program analysis

As evidenced by each case study's key takeaways and the broader key lessons, the TOPcities pilot offered many opportunities for learning and growth. The Saint Paul and San José sprint teams showed tremendous persistence, creativity, and adaptability throughout the sprint as they tried out new approaches and skills. Both cities developed meaningful products and capacities that we hope will lead to innovation in other areas of their work.

As with all pilot programs, several elements of program design worked well, while others provided opportunities for improvement in future cohorts. The following subsection provides a brief analysis of some of the highlights and opportunities to iterate upon moving forward:

1. **Centering community voices**: The TOPcities sprint gave local governments an intentional space to think and act differently relative to their traditional practices. This meant that public servants listened and learned from the community first, and then designed a tool to meet those needs. This marks a significant shift in how cities traditionally design policies and initiatives. When we asked local government participants how their perspective on designing solutions with their community changed through the program, one shared that the sprint "reinforced [the] importance of collaboration and co-creation from the outset with those with lived experience."

   Given the benefits of this programmatic design feature, we plan to further amplify coaching to support more robust community ownership of design and development processes in future sprints.

2. **Leaving space for iteration**: We launched the sprint as a four-month process acknowledging the intrinsic value of a design sprint: it forces participants to iterate quickly and focus deeply to finish one important priority in good time. A detailed description of the benefits of this time-boxed approach is described in Key Lesson #1 on page 25: "Governments can adopt new practices quickly without forsaking intentionality."

   While designing this initiative as a sprint clearly achieved its desired impact, teams would have benefited from slightly more time for early-stage team-building, onboarding, and having space to navigate political winds, make mistakes, and iterate accordingly later on. Future TOPcities programs will continue as a design sprint, with two additional weeks, and a robust pre-work phase with additional CPI and the Beeck Center coaching to support these needs.

3. **Expanding product advising and coaching**: Navigating a design sprint is difficult, particularly for team members who are new to the design process. CPI, the Beeck Center, and the product advisors provided significant coaching throughout the program, which exposed public servants to new strategies for analyzing and addressing systemic challenges, collaborating across sectors, centering community, and leveraging technology when designing solutions. The benefits of this approach are clear. One city official shared that the sprint "will make me advocate more clearly for longer-term development plans and [community] engagement, and hopefully I can use this project as an example for why taking the time to do this right instead of 'building the plane as we fly it' is beneficial."

   Building on this foundation, future cohorts will continue to include extensive coaching in human-centered design, open data, product development, and strategies for centering community, including in-house product advisory support from the Beeck Center.

4. **Building stronger cross-city connections**: Teams significantly benefited from collaborating and sharing ideas across sectors, as evidenced by Key Lesson #3 on page 26: "Cross-sector collaboration leads to innovation and supports upskilling across sectors." Notably, across both teams, there are early signs that these cross-sector connections will continue past the conclusion of the sprint, particularly as cities and community partners collaborate to roll out these tools. Team members from Google.org have similarly expressed interest in continuing to support the products' continued development post-sprint.

   While the cross-sector element of the program was a particularly strong design feature, there is an opportunity to strengthen program design around promoting cross-cohort connections. Future iterations of TOPcities will magnify the benefits of the learning network by increasing opportunities to reflect and share ideas across places and with external subject matter experts.

Conclusion

The TOPcities sprint launched in February 2021 at a point where COVID-19 vaccine availability was still limited, daily case rates were high, and many local governments and residents continued to face challenges resulting from the pandemic. When the teams launched their products on June 18th, the landscape in the United States had dramatically shifted. At least 55 percent of U.S. adults over age 18 had been fully vaccinated, and infection rates had significantly lowered to a seven-day average of 11,630 cases per day. This moment of progress is a cause for celebration, gratitude, and recognition of those we have lost.

As the United States continues to re-open, local governments will be asked to adapt in new ways. We believe that the skills Saint Paul and San José gained during the sprint will enable them to adapt as their local contexts shift and that they will be able to apply their new strategies for analyzing and addressing systemic challenges, leveraging technology and open data to develop solutions, collaborating across sectors, and most importantly, centering communities.

Looking forward, we're excited to see how San José and Saint Paul continue to roll out their products to the community, iterate upon those products, and incorporate them into their broader eviction and homelessness prevention strategies. At CPI and the Beeck Center, we are also entering our own internal process of iteration on TOPcities. As a pilot program, TOPcities was our own version of a minimum viable product. We are now entering our process of iterating on the program to amplify skill development, support mindset shifts, and scale our impact. We're excited to see how TOPcities evolves to have a deeper and broader-reaching impact.

Sprint toolkit: a guide for community-driven innovation in cities

About the sprint toolkit

This toolkit was compiled following the first iteration of the TOPcities program, an 18-week innovation sprint through which two local governments worked with community and tech partners to develop tools that would address pressing local challenges emerging from COVID-19.

TOPcities
Modeled on The Opportunity Project

The Centre for Public Impact and the Beeck Center for Social Impact + Innovation at Georgetown University partnered to launch the TOPcities program, and have developed this toolkit to document best practices and lessons from pilot sprints conducted in San José, CA, and Saint Paul, MN. The TOPcities program was developed with generous support and guidance from the Knight Foundation and Google.org. The TOPcities program was based on The Opportunity Project (TOP), created by Census Open Innovation Labs in 2016. This toolkit was designed for local governments as a companion to the TOPx Toolkit for federal agencies. This toolkit was written by Katya Abazajian, Katie Stenclik, and Andrea Mirviss. It was released on August 19, 2021, under a Creative Commons Attribution-ShareAlike license and should be cited as: **"TOPcities sprint toolkit: a guide for community-driven innovation sprints in cities" (2021). Washington, D.C.**

Centre for Public Impact
A BCG FOUNDATION

The Centre for Public Impact is a not-for-profit founded by Boston Consulting Group. Believing that governments can and want to do better for people, we work side-by-side with governments—and all those who help them—to reimagine government, and turn ideas into action, to bring about better outcomes for everyone. We champion public servants and other changemakers who are leading this charge and develop the tools and resources they need so we can build the future of government together.

beeckcenter
social impact + innovation
GEORGETOWN UNIVERSITY

The Beeck Center for Social Impact + Innovation at Georgetown University reimagines systems for public impact using design, data, and technology. Beeck Center projects test new ways for public and private institutions to leverage data and analytics, digital technologies, and service design to help more people.

KF KNIGHT FOUNDATION

The John S. and James L. Knight Foundation is a national foundation with strong local roots. We invest in journalism, in the arts and in the success of cities where brothers John S. and James L. Knight once published newspapers. Our goal is to foster informed and engaged communities, which we believe are essential for a healthy democracy.

Google.org

Google.org, Google's philanthropy, supports nonprofits that address humanitarian issues and apply scalable, data-driven innovation to solving the world's biggest challenges. We accelerate their progress by connecting them with a unique blend of support that includes funding, products, and technical expertise from Google volunteers. We engage with these believers-turned-doers who make a significant impact on the communities they represent, and whose work has the potential to produce meaningful change. We want a world that works for everyone—and we believe technology and innovation can move the needle.

Purpose and goals

The TOPcities project was launched in February 2021 by the Centre for Public Impact (CPI) and the Beeck Center for Social Impact + Innovation at Georgetown University. Together with the City of San José and the City of Saint Paul, CPI and the Beeck Center helped sprint teams complete an 18-week sprint to leverage public data, government and community perspectives, and tech talent to build products that meet residents' needs emerging from the COVID-19 pandemic.

This toolkit is a resource for people working in **local governments** to chart a path to transform public data into digital tools that address pressing local challenges while building participants' skills for tech, design, and data use. TOPcities brings together technologists, public servants, and community organizations to prototype solutions that use local data to meet real community needs.

While CPI and the Beeck Center provided hands-on support to cities running complete TOPcities sprints, this toolkit allows anyone to **replicate the TOPcities model** on their own. By following the guidance in this toolkit, participants can:

- Find meaningful applications for local data to tackle community needs;
- Identify new models of collaboration with community partners and technologists through civic innovation; and
- Learn ways to leverage human-centered design for public interest technology.

The sprint is designed to lead participants through an inclusive and collaborative process to design technology that **centers residents' needs and priorities**. Cross-sector relationships can supercharge efforts to innovate when using public data and public interest technology, and are most impactful when community members are active and engaged stakeholders in the work. Delivering equity through public systems requires incorporating the voices and needs of community members in civic innovation.

Even if you're not able to replicate an entire TOPcities sprint, you can adapt the milestones, tasks, and resources in this toolkit to design your own innovation sprint to co-create digital tools that serve your community. Anyone can use the lessons from this toolkit.

Before you get started, we suggest reviewing the TOPx Toolkit Glossary to get familiar with key terms.

How to use this toolkit

Who can use this?

- Public policymakers and decision-makers;
- Tech-interested government staff;
- IT, data, and innovation experts in government or working with governments;
- Technologists working on public interest tech tools built from open government data; and
- Community organizations partnering on government innovation projects.

What's included?

- Milestones to help you structure a TOPcities sprint;
- Step-by-step instructions for executing your sprint;
- Tips and best practices; and
- Resources from our pilot sprint.

What will you learn?

By the end of this sprint, you will have co-created a prototype of a tech tool that can grow into a robust and effective problem-solving resource for your city. This sprint is just the first step in a process to integrate your prototype into impactful innovation goals over time.

Along the way, you'll develop skills in:

- Human-centered design methods to incorporate community input and lived experience into tech and policy design;
- Strategies to identify impactful ways to use local data;
- Cross-sector collaboration with people from tech, government, and community spaces; and
- Product development workflows that serve the public interest.

A core element of the TOPcities model is **investing in community relationships and leveraging data and technology for equitable outcomes**. By running a TOPcities sprint, you'll develop stronger, more collaborative relationships with community leaders and residents. These relationships will help inform tools that are designed with the direct participation of the residents they serve and address real community needs.

Tips and tricks

To get your team started, consider these tips for overall sprint management. TOPcities sprints can create fast-paced opportunities to build momentum around new ideas and applications of open data, but they can also be challenging for those who are new to civic innovation. These tips can help you create a more seamless and engaging sprint for your participants:

1. **Be flexible about "data."** Local governments won't always have the exact data that users ask for or need. Data can be any form of structured information, so think big about what constitutes data and how you can use the sprint process to improve the quality of data that's going into digital tools.
2. **Don't let "perfect" be the enemy of "good."** The first solution is rarely the right one. This project is about building a prototype and you'll have limited time to complete it. The time pressure can help you get an initial product out, and, by making iterative improvements to the product over time, you can pave the way for longer-term success.
3. **Lose the jargon.** Sprint teams should be made up of people from different sectors, but this means that jargon and other industry language may not be known to everyone. Ensure that your sprint team has ways to call out jargon and use more accessible language.
4. **Recognize the importance of project management and facilitation.** The sprint has many moving parts and diverse stakeholders from varying backgrounds that bring their own goals, personalities, and skills to the process. Leveraging these unique skills, while also working towards a common vision for the sprint, requires deft project management. Bring in expert project managers that can help form a cohesive team that empowers city, community, and tech partners to drive towards milestones in their area of expertise and meaningfully contribute to each sprint phase. Further, tap into expert facilitators for user research, research synthesis sessions, or other important sprint team workshops throughout the sprint. Project management and facilitation are not universal skills and getting the work environment right is essential to ensuring that the sprint moves forward.
5. **Prioritize community voices.** Often, institutions and organizations can have strategies and plans that influence how and why public interest tech gets built. Pay attention to community members when they push back on the goals of institutions and organizations, seek to understand their interests, and try to adapt accordingly. Partnering with community organizations that are trusted by residents is one way to ensure the voices of those closest to the problem are prioritized. Providing funds or resources to support community partners' involvement can ensure they have the capacity to fully engage with the sprint—and is just good practice.
6. **Recognize funding needs and get buy-in from the start.** Sustaining public interest tech projects requires funding to continue improving, and support from leaders to iterate upon initial projects. Successful public interest tech requires collecting feedback and making systemic improvements over time, which requires funding.
7. **Hold off on finalizing solutions and don't be afraid to shift course.** Agile and iterative development means there will be changes throughout the project. Your sprint team shouldn't know what solution they're building until after community research is done. The best-case scenario is that your prototype does change significantly over the course of the sprint to adapt to new findings and deliver more meaningful outcomes that are aligned with community needs.

Planning a TOPcities sprint

Use this outline to map out your TOPcities sprint week by week. Feel free to stack some of the tasks to occur concurrently. At a minimum, the TOPcities sprint should take 20 weeks, not including the pre-work conducted in Phase 0.

TOPCITIES SPRINT

	Task	Effort	Time
PHASE 0	Set up a cross-functional city team	●○○○	As needed
	Define a problem statement and project charter	●●○○	As needed
	Recruit sprint participants	●●●○	As needed
	Conduct a data inventory	●●●○	As needed
PHASE 1	Launch user research	●●●●	4 weeks
	Conduct city data assessments	●●○○	2 weeks
	Brainstorm and prioritize solutions	●●○○	2 weeks
MIDPOINT REVIEW	Conduct an impact evaluation workshop	●●○○	1 week
	Confirm product owner(s) and identify funding	●●●○	1-2 weeks
	Start sustainability planning	●●●○	Ongoing
PHASE 2	Build wireframes or initial prototypes	●●○○	1 week
	Conduct user tests	●●●○	2 weeks
	Build the final Minimum Viable Product (MVP)	●●●●	4-6 weeks
PHASE 3	Demonstrate the MVP	●○○○	1 week
	Launch and collect feedback	●●○○	2 weeks
	Plan for long-term sustainability	●●●○	Ongoing

Phase zero: pre-launch

In this phase, which occurs in the months before the formal launch of the sprint, you'll need to get your ducks in a row to run a successful sprint. This might mean having early strategic conversations with key stakeholders who can support your project and ensure it's tied in with government and community policy goals. You'll need to dedicate time and energy to building your sprint team. Collaborating across sectors means connecting with people who have different working norms and expectations. Use team-building exercises to ensure your sprint team is ready to go on Day 1.

MILESTONES & TASKS

Milestone 1: Build a sprint team
Milestone 2: Set a project charter

Tasks

1. Set up a cross-functional city team
2. Define a problem statement and project charter
3. Recruit sprint participants
4. Conduct a data inventory

1. Set up a cross-functional city team

- Spread the word about the TOPcities model and bring executive champions into the project. Share key resources like this toolkit, the report, and other resources about the TOPcities model to ensure stakeholders understand the project and its goals.
- Create touchpoints to engage key leadership and stakeholders. City leaders will be important advocates for improvements to your prototype later on, and building in regular opportunities to update them can ensure you're not going it alone.
- Use the potential roles and responsibilities resource to identify the appropriate participants to include in the city team. As facilitators of the TOPcities sprint, the city team needs to set internal roles before seeking out sprint participants, including additional city staff, community partners, and tech partners.

NEED TO KNOW:

Team-building is extremely important for cross-sector collaboration. Sprint participants might default to their industry's ways of conducting meetings or setting deadlines for collaborative work. But in order to align on what's best for communities, participants need to find common ground and align on a vision and work style to ensure that residents remain at the center of tech design and development.

WHAT WORKS?

The cities of San José and Saint Paul participated in the first ever TOPcities sprint and throughout this toolkit we'll highlight their stories. It took longer than anticipated for teams to come together – we underestimated the time required to select and onboard community partners, and to share the local context on the problem with tech partners so they were ready to do the work. We added teambuilding to TOPcities pre-work activities to encourage future sprint facilitators to invest more in this work earlier in the sprint process.

2. Define a problem area and project charter

- Determine the problem area. Try to define a problem that is smaller than a general issue area (like "housing") but larger than a specific challenge you already know about (like "difficulty accessing assistance"). A right-sized problem area leaves room for research to expose challenges but provides a clear direction for investigation.
- Make a list of potential community partners based on local organizations that directly serve residents, engage residents as members of their organization, or have working relationships with other community organizations. Find a community partner who has direct ties to community members, prioritizes equity, and is willing to provide substantive input on user research and product design.
- Assess strategic plans of all major stakeholders. Look at the City and community partners' strategic plans and identify salient issues with broad support and opportunities for tech improvement.
- Complete the problem statement and project charter template. Share them widely and ensure that anyone who might benefit from your work is aware of and supporting the project. This activity may also help to ensure resources, staff, and funding are contributing to sustaining and improving the product after the sprint.

3. Recruit sprint participants

- Make a list of potential tech partners based on partners who will be able to lead development in the sprint, integrate community input into their work, and account for the longevity and sustainability of the product they build so that city and community teams can later support the products on their own. At a minimum, tech teams should be staffed with UX researchers, designers, program managers, engineers, and product managers.

- Once your partners are on-boarded, set up team norms, communications, and meeting structures. Share materials about the TOPCities sprint including this toolkit, the TOPcities report, and other relevant websites or onboarding materials.
- Determine who project leads are for city, community, and tech partners. Set project lead meetings and working meetings. Understand that partners will have different expectations for how meetings are run and set norms early.
- Assign roles using the potential roles and responsibilities resource to identify the activities for participants from community partner organizations and tech partners.
- Decide who is the decider about product decisions; if you can, assign a product owner who will own development of the tool after the sprint. This can be a city team or community team representative. Later on, you'll also need to decide who will work with the product owner in the long term to support the product's development and improvement over time.

NEED TO KNOW:

Product owners can take on multiple strategic roles in a sprint, including helping the sprint run on time, ensuring that community voices are represented, and providing support to sprint participants. In the TOPcities model, product owners are responsible for tech tool sustainability and impact over time. Product owners can be public servants with oversight authority or community partners in charge of delivering outcomes and must be able to make decisions about product development.

WHAT WORKS?

Saint Paul and San José both identified product owners who work at the City government. In both cities, product owners were staff of departments with oversight over the problem at hand, like San José's product owner who also leads the City's Rent Stabilization team. Saint Paul aims to transition product ownership to their partners at the county government to better align their prototype with the strategic needs of their community partners.

4. Conduct a data inventory

- Create a list of data systems with information relevant to the selected problem area. Liaise with owners of those data systems, including looking across departments and jurisdictions to build new relationships with data owners. The list of data systems does not need to be complete in order to be helpful!
- Create a list of datasets, or a data inventory, that includes which system data is contained in and other relevant metadata. Share the data inventory with sprint teams and begin ensuring that data in the inventory is accessible and usable, and that problem understanding research in the next phase connects to available data.

Resources

- Potential roles and responsibilities
- Template RACI Chart
- Project charter template
- Problem statement template
- Sample informal agreement (community partner)
- Sample informal agreement (tech partner)
- Data inventory guide
- Data inventory & quality checklist

Phase one: define & understand the problem

In this phase, you'll conduct interviews and desk research to determine what your community needs from public data or technology. Leveraging human-centered design strategies, you'll conduct interviews with people who have direct experience navigating the problem area you've selected and find opportunities for data to play a role in making their lives easier. It's important to keep an open mind and remember that iterative learning is a core part of this process. Expect your ideas and understanding of the problem to change in new and exciting ways.

MILESTONES & TASKS

Milestone 3: Conduct stakeholder interviews & identify data needs
Milestone 4: Synthesize key use cases for open data

Tasks

1. Launch user research
2. Conduct city data assessment
3. Brainstorm and prioritize solutions

1. Launch user research

A. Review research and understand the landscape

- Review existing research or speak to key informants who can tell you how the problem area works, what major barriers exist, and how people generally navigate challenges. Have city and community teams present what they know to the sprint team so that tech teams and other stakeholders are up to speed with institutional knowledge. This may include presenting existing research on user journeys and known barriers.
- Conduct a landscape scan of existing open source solutions that address the problem area that your team is attempting to tackle. Speak to technologists who have attempted to solve this problem before.

B. Interview stakeholders and potential users

- Set research questions that will expose new information about how data and technology play a role in the problem area in your user interviews. Ex. "Who's working on this problem? What data do they need? Why do they need it? How do residents use data to address or navigate this problem?"
- Conduct stakeholder mapping to identify which stakeholders are doing work related to your chosen problem area. Listing out these stakeholders, or mapping them by influence and interest can help to identify who to interview for user research. Often, stakeholders can also connect you to other members of their trusted networks, like residents with lived experience.
- Create a plan for building trust with potential interviewees, including by safeguarding their personal information. Separate interviewee names from interview insights and communicate to interviewees how their information will be protected.

NEED TO KNOW:

Interviewing residents about sensitive issues that they're facing requires some preparation to frame questions respectfully and protect residents' privacy. Some local governments may have internal processes for documenting interview insights and protecting interview data. Check with your City Attorney or equivalent to determine best practices.

WHAT WORKS?

The Saint Paul team interviewed residents experiencing homelessness to understand which information was essential for them to find access to services and housing. The team created consent forms that clarified how data would be stored and when data would be shared, including whether data would be considered public record. The City asked a trusted community advocate to be present for the interviews.

- Create an outreach list including potential end-users or people who have direct experience with your problem area. Begin conducting interviews to map the journey that residents take when dealing with your problem area. Pay particular attention to specific barriers and their location within the journey. Identify how data and information play a role in navigating that journey.

C. Document observations and insights

- Conduct synthesis sessions to collate the user research and begin documenting observations from users about data-specific challenges and technical needs. Try connecting things people say in interviews to data sources that you have available.
- Use whatever framework you like best (sticky notes, asynchronous brainstorming, interview tagging) to identify major themes from your workshops and isolate key insights. Highlight themes or insights that are associated with a high concentration of observations about data or information challenges; these might be particularly impactful to address with a technical solution.
- Include a part of your synthesis workshop dedicated to exploring how people need solutions. What features matter to people dealing with this challenge?

D. Refine your understanding of the problem

- Create a problem statement (that is relevant within your problem area) using the problem statement template. A problem statement is a specific element of your chosen problem area that exposes the challenge that your future tool is going to try to solve. The problem statement should clearly identify who is affected by the challenge and why it matters to your community. You should also try to avoid including an answer to the problem within your problem statement.

2. Conduct city data assessment

- Review your data inventory and identify data that maps to the problem statement. Any data that was highlighted by user interviews can be considered high-value data.
- Compile high-value data from city departments or community partners. Ensure you can access it, and that it's high-quality, complete, with metadata, and machine-readable.
- Improve data that is not high-quality by working with data owners to process and analyze raw datasets, with a focus on improving high-value data. This often takes time, resources, and data processing expertise.

NEED TO KNOW:

The data you have available is likely not perfect. Data does not have to be "big" in order to be useful! Think about qualitative data or data that needs to be processed or visualized in order to be usable by residents as part of your inventorying process. Ultimately, a TOPcities sprint can help you identify what data you still need, and your prototype can also help you build a new foundation to collect that data in more structured ways.

WHAT WORKS?

The San José team shared information about pop-up locations run by their partners at Catholic Charities and information about how to expedite the rental assistance process. They identified that this data was high-value by having community partners in the room throughout user research, synthesis, and ideation sessions, who helped call out which pieces of information might be most impactful for residents to know.

- Investigate any needs to protect sensitive data. Make plans to protect personally identifiable information if any exists, and work directly with project leaders, including the product owner if one exists, and data owners to ensure that data protections are written into data and product governance.

3. Brainstorm and prioritize solutions

- Work with sprint participants to think creatively about how you might address the new problem statement identified in the synthesis stage. Don't be afraid to take a few turns at brainstorming solutions and vetting them with city or community leaders to assess viability.

- Prioritize solutions by feasibility and potential impact. Consider which community partners might support the tool, and count this under feasibility. Spending more time in this phase ensures a more impactful product later on.
- Decide as a team on which solutions are most feasible and impactful. Actively seek input from community partners and their constituents to decide whether solutions are a right fit for the sprint process. Be sure to socialize final ideas with senior leadership and sponsors early on.

Resources

- Introduction to user research
- Empathy isn't enough
- Stakeholder mapping template
- How to conduct user interviews
- Guide to design brainstorming
- What makes a good problem statement
- Idea prioritization matrix
- Problem statement template

Midpoint review

Take a beat to sit down with your team and think about where you've been and where you're headed. Thinking about impact and sustainability is often left to the end of projects. Plan ahead by conducting midpoint workshops with your team to understand what you've achieved so far, what you hope to achieve, and how you might ensure that this project lasts into the future. Important questions to answer might be:

- Who owns improvements to the prototype after the sprint?
- How do these improvements get funded?
- What might be the deeper, broader impact of the tool?
- What do we need to set in motion now to have that impact?

MILESTONES & TASKS

Milestone 5: Plan for impact evaluation
Milestone 6: Plan for tech tool sustainability

Tasks

1. Conduct an impact evaluation workshop
2. Confirm product owner(s) and identify funding
3. Start sustainability planning

1. Conduct an impact evaluation workshop

- Ask your team to articulate exactly what is the expected impact of this work. Then go through the impact evaluation template and think through how your expectations match with reality. Evaluate the inputs, activities, outputs, outcomes, and impacts associated with your project.
- Engage stakeholders to review your impact evaluation plan. Sharing an impact evaluation plan is a helpful way to let key stakeholders know what to expect and build buy-in for the

future. Possible stakeholders could include executive champions who are not directly involved in your sprint or community leaders who are affiliated with your community partner organization.

- Plan for impact evaluation in the future. Identify outcome and impact metrics that measure the equitability of your tool and the effects it has on users' experiences.

NEED TO KNOW:

Beginning to plan for impact evaluation provides an opportunity to check in on whether your problem statement and proposed solutions align with the values of your community. Does the solution reflect your organization's goals? Your sprint participants' goals? Your users' goals? You can also think broadly about whether the tool will lead to community-wide impact that improves equity in measurable outcomes.

WHAT WORKS?

After doing an impact evaluation workshop, cities may realize the need to increase the clarity of their overarching strategic goals. Cities can use the sprint as an opportunity to clarify how exactly their policy initiatives fold into tech tool development. The prototype's goals could then be folded under cities' departmental goals and their partners' goals to leverage technology more intentionally.

2. Confirm product owner(s) and identify funding

- Identify a product owner who can liaise with tech experts, delegate improvement tasks, report up to leaders, and define the strategic direction of the work. This doesn't have to be a technologist, but they should be well-versed in communicating with tech workers.
- Prototypes need investment to survive. Plan ahead to identify funding streams associated with existing initiatives, upcoming grant opportunities, or even revenue streams that might sustain the tool's use.

3. Start sustainability planning

- Work with the product owner to ensure they have the tech capacity, funding sources, and data linkages they need to keep the product running.
- Hiring staff to support improvements to the prototype is the best way to ensure that prototypes are improved and integrated with broader strategic goals into the future.

Resources

- Impact evaluation template
- "So, you're a product owner" 18F resource
- Product sustainability checklist

Phase two: design & prototype

In this phase, you'll start building your prototype! You might prioritize spending time agreeing on features and elements of a successful tool with your sprint participants, or you could choose to begin by designing with target users and identifying additional features along the way. Regardless, you'll need to adapt your product to users' needs throughout this phase. Working in the open and building structured opportunities for community and stakeholder feedback into your process can improve the quality of your finished product.

MILESTONES & TASKS

Milestone 7: Create a wireframe
Milestone 8: Build a Minimum Viable Product (MVP)

Tasks

1. Build wireframes or initial prototypes
2. Conduct user tests
3. Build the final MVP

1. Build wireframes or initial prototypes

- Using everything you learned in the problem understanding phase, work with the tech team to build out wireframes that prioritize users' preferred ways to access information or data. Be sure to consider the accessibility needs of the population.
- Begin noting where data linkages will be needed to ensure that data flowing through the prototype is updated automatically and with any necessary quality checks. Pull data owners into conversations as needed to validate expectations about data linkages.

2. Conduct user tests

- Work with your community partner to organize user tests made up of target users for the product. Note: beneficiaries of the product and target users might be different groups! Think about who will actually be using the product and speak directly to them.

- Use best practices from Civic User Testing (CUT) group models to ensure that sessions are designed to be inclusive and engaging to participating community members.
- Consider compensating users participating in tests for their time based on the recommendations of local community organizations and service providers.

NEED TO KNOW:

When attempting to solve communities' most pressing challenges, sprint teams will likely learn that not all residents have access to internet or internet-enabled devices. This means sprint teams should use user research and synthesis to identify the best channel for communicating with residents who they hope to serve through their solution. This may mean seeking out in-person supplements to tech prototypes that are ready to deploy at product launch.

WHAT WORKS?

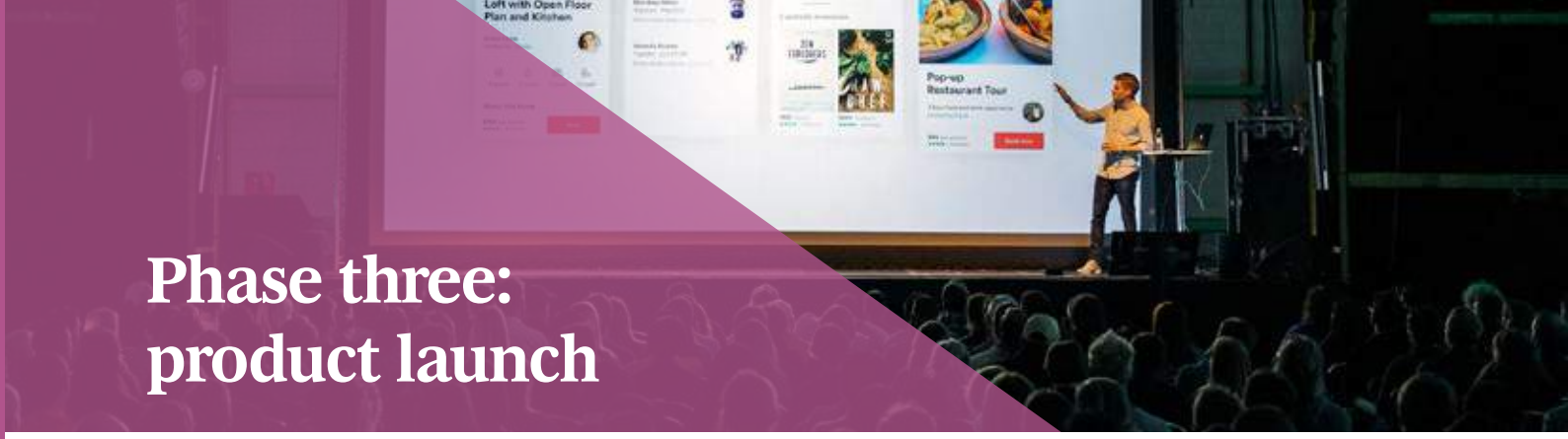
San José's sprint team learned that most people receiving support from Catholic Charities or receiving rental assistance do not have reliable access to internet, or primarily access web resources through their smartphone. This has two implications for the prototype: 1) it would have to accessible via mobile and 2) in-person providers would need to augment the tool. Given how essential services providers would be to administering the tool, they would need to have a say in the prototype's design and accessibility.

3. Build the final Minimum Viable Product (MVP)

- Work closely with community partners and target users to integrate user feedback into the final MVP and set up data linkages that will make the prototype work.
- Liaise with data owners who are contributing data to the product to ensure that data will be stored appropriately in city or community partner data systems, and revisit data protection needs identified in Phase 1. Ensure that workflows exist to update the data regularly, and that relevant data owners are read-in to their responsibilities with regards to the product's maintenance to keep it up-to-date and accurate.
- Conduct any final feedback sessions to ensure that final designs are aligned with the expectations of all stakeholders and team members. Prioritize feedback from community partners and adjust course depending on their expressed needs.

Resources

- The CUTGroup Book
- User testing guide
- How to implement an effective usability test
- Analyze usability testing data



Phase three: product launch

Time to launch your product! Let the world see what you've created. Remember that this is just the first step toward longer-term solutions that can make a difference in your community. Use this prototype as a foot in the door to build bigger and better things.

MILESTONES & TASKS

Milestone 9: Demo Day
Milestone 10: Public launch

Tasks

1. Demonstrate the Minimum Viable Product (MVP)
2. Launch and collect feedback
3. Plan for long-term sustainability

1. Demonstrate the Minimum Viable Product (MVP)

- Communicate the definition of an MVP to any key stakeholders and sprint participants to ensure that your collaborators understand the role of an MVP. Ensure that they understand the benefits and shortcomings of the tool and how it might improve over time, with the right support from stakeholders.
- Share your product with anyone who has helped you along the way! Use this as an opportunity to open up a dialogue with community members and share how and why you built this prototype. Consider hosting a "Demo Day", an event where you publicly launch and showcase your product to your community.

2. Launch and collect feedback

- Create permanent channels for users to submit feedback about the tool. This might be adding a comment form, providing contact information for the product owner, creating usability guides for the open-source documentation, and more.

- Continue incorporating feedback into the design of the tool and hand-off recommendations to the product owner.

NEED TO KNOW:

Tools are not always successful in their first iteration. Understand that your tool may fail and find ways to fail forward.

Set expectations with stakeholders to ensure they know that your prototype will see many changes and improvements over time, and secure the buy-in needed to make it happen.

WHAT WORKS?

Both teams left their first TOPcities sprint with a prototype and a roadmap for improving that prototype, including a list of features that they would prioritize for future development, and a working understanding of product ownership and funding streams that might support the product's growth. What happens next depends on the support of innovators and leaders in government who choose to move this work forward as they determine how to best serve their residents.

3. Plan for long-term sustainability

- Work across city and community teams to chart a path toward sustainability of the product, including by identifying funding streams and decision-making about the tool's future.
- Identify which tech team participants will be available to support with tech transitions. Ensure you have a plan for hosting the tool and sharing access to adapt source code.
- Develop a sustainability memo that highlights key takeaways including ownership, funding streams, community partners/programs, and high-level strategic goals. Share this memo with your partners and key stakeholders!

Resources

- How to make the most of Demo Day

TOP*cities*

Modeled on The Opportunity Project

If you are interested in learning more or partnering with the Centre for Public Impact and/or the Beeck Center, please contact us at opportunityproject@centreforpublicimpact.org