THE GUELPH CIVIC ACCELERATOR: A PUBLIC PROCUREMENT EXPERIMENT

A CASE STUDY

MAY 2017





Author



Caitlin Cassie Policy Advisor

Caitlin is a Policy Advisor at the Brookfield Institute for Innovation + Entrepreneurship (BII+E), focusing on skills development and the education to employment pipeline. Prior to joining BII+E, Caitlin worked on dynamic policy issues in the public, non-profit, and international development sectors. She worked for a startup consulting firm that supports collaborative city building, completed an international development fellowship in Uganda, and worked as a Policy Advisor for the Ontario Public Service. Caitlin holds a Master of Public Policy from the University of Toronto and a Bachelor of Arts from the University of British Columbia.



caitlin.cassie@ryerson.ca



The Brookfield Institute for Innovation +

Entrepreneurship (BII+E) is a new, independent and nonpartisan institute, housed within Ryerson University, that is dedicated to making Canada the best country in the world to be an innovator or an entrepreneur.

BII+E supports this mission in three ways: insightful research and analysis; testing, piloting and prototyping projects; which informs BII+E's leadership and advocacy on behalf of innovation and entrepreneurship across the country.

For more information, visit **brookfieldinstitute.ca**.

The **Policy Innovation Platform** is an initiative of BII+E that supports the continuous adoption of policy innovation methods and tools by policymakers in order to deliver better public policies, programs, and services for all Canadians.

For more information, visit **brookfieldinstitute.ca/pip**.



@BrookfieldIIE

/BrookfieldIIE



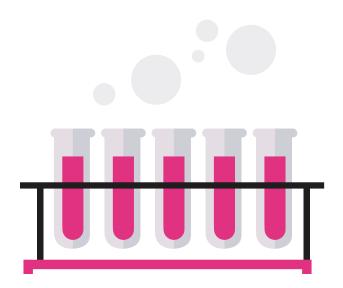
The Brookfield Institute for Innovation + Entrepreneurship



TABLE OF CONTENTS

Introduction	4
Background: City of Guelph's Civic Accelerator Pilot Project	5
Traditional Request for Proposal (RFP) Process vs. Civic Accelerator RFP Process	6
Details of the Inaugural Civic Accelerator Program	8
Has the Civic Accelerator Pilot Achieved its Goals (So Far)?	9
Redesigning procurement in order to improve the delivery of public services	9
Creating more commercialization opportunities for early-stage companies	10
How To Create a Civic Accelerator, Guelph Style	12
Work within the bounds of existing procurement regulations and protocol	12
Work closely with legal and procurement teams – relationships matter	13
Identify champions within government	13
Identify champions in the local innovation ecosystem	14
Spend time with departments defining the challenge that needs to be solved	15
Design your RFP with early-stage companies in mind	16
Prioritize data-driven policy making	16
Bonus: How it Could Be Even Better	17
Align the Civic Accelerator program with internal strategic planning initiatives	17
Need to line up more opportunities for funding and financing	17
You've Got Our Attention, Guelph!	18
Appendix: Traditional RFP Model vs. Civic Accelerator RFP Model	19





INTRODUCTION

Guelph's Civic Accelerator pilot project has caught the attention of municipal governments, procurement aficionados, and policy geeks across Canada, and with good reason. Government procurement, the act of government purchasing goods and services, is a powerful lever for policymakers.

First, well-run procurement processes enable government to select vendors to provide highquality goods and services that in turn enable government to provide high quality public programs and services to citizens.

Second, procurement can position government as a critical customer for businesses; in 2016, the Ontario government alone procured \$6 billion of goods, services and construction from over 55,000 vendors.¹ If desired, procurement can position government as an important customer for early-stage companies developing innovative products, therefore contributing to broader innovation policy objectives.

The **Civic Accelerator pilot project** is an initiative co-developed by the **City of Guelph's innovation team** and the **Guelph Lab**, which has a mandate to leverage research from the University of Guelph and apply it to real life problems. It is one example of what can happen when a city government reimagines how they do procurement within the existing regulatory context, in order to provide better services to citizens, on one hand, and create commercialization opportunities for earlystage businesses on the other.

We know governments across the country are considering procurement experiments of their own. We believe that insights from Guelph's Civic Accelerator might be instructive. We walk interested readers through this as follows: first, we briefly explain the Civic Accelerator model; then we examine whether the Civic Accelerator pilot is achieving its goals; we then dive into the model to glean *how* it actually works; and, finally, we conclude by sharing some thoughts on what we are likely to see next in Guelph and beyond.



BACKGROUND: CITY OF GUELPH'S CIVIC ACCELERATOR PILOT PROJECT

The City of Guelph publicly launched the Civic Accelerator pilot project in June 2016. The pilot had two core objectives:

- Redesign traditional procurement processes to de-risk complex technology purchases in situations where no clear solution is available on the market.
- 2. Create commercialization opportunities for early-stage businesses in southwestern Ontario.

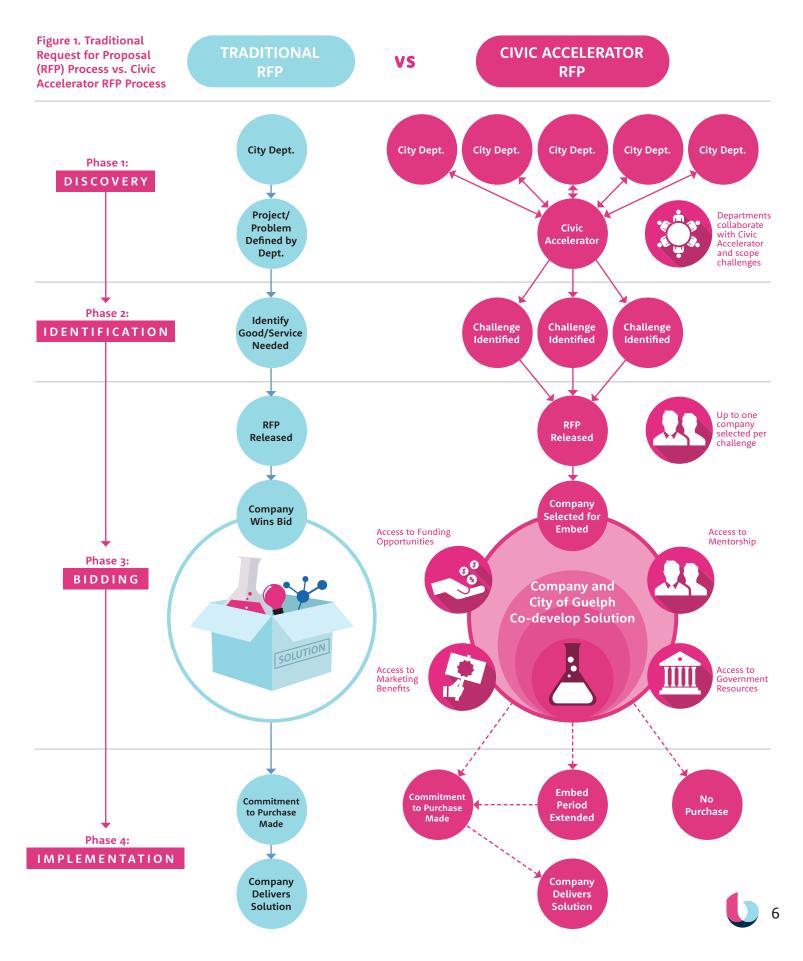
In a traditional competitive procurement process, a government department identifies a good or service it requires, describes that good or service in detail, and then invites companies to bid for the opportunity to provide it. In other words, government defines a solution and seeks out the most appropriate vendor to provide it.

In Guelph, this approach works well for an estimated 80-85 percent of government procurement needs. However, in 15-20 percent

of instances, while the problem may be clear, the best solution to address it is not; it was for these instances that the Civic Accelerator pilot project was initiated.² In addition to Guelph Lab, the city teamed up with other key organizations to execute the pilot, including: Innovation Guelph (a member of the Ontario Network of Entrepreneurs), Canada's Open Data Exchange (ODX), the University of Guelph's Centre for Business and Student Entrepreneurship, and the Guelph Chamber of Commerce.³

The Civic Accelerator completely re-configured the procurement process (see Figure 1 to compare the Civic Accelerator Request for Proposal (RFP) process against the traditional RFP process). Rather than departments identifying specific products or services they intended to purchase, the innovation team within the Office of the Chief Administrative Officer (CAO) asked city departments to articulate challenges they were facing that they had not yet been able to solve, and then helped the departments to refine these challenge statements. Three challenges were identified in the inaugural round.







These challenges were made public via an RFP for project teams and companies to submit ideas for solutions. This approach created the possibility for city officials to consider solutions that differed from, and were potentially more effective than, the market-ready solutions that were available to them through a traditional approach.

Shortlisted candidates for each challenge delivered pitches to the Civic Accelerator team. Up to one company per challenge was then invited to embed within the government for four months to build out their solution through a co-development process with city officials and the support of Civic Accelerator partners. This provided an opportunity for successful project teams and companies to better understand the problem they were trying to solve, increasing the likelihood of developing a solution that would most benefit citizens.⁴

Although they were not paid during the embed, and the City did not commit to making a purchase at the conclusion of the embed period, incentives for companies to participate included: access to city government (and therefore exposure to a potential anchor client); access to mentorship through delivery partners; and the promotional benefits of being involved in the program. This "incentive package"ⁱ for participating companies has helped the City of Guelph achieve its second objective, namely to support the commercialization of early -stage companies.⁵

Following the embed period, the City could move forward with one of three options:



Extend the timeframe of the embed, enabling the project teams and the City to continue working together.

Make a purchase.⁶



Details of the Inaugural Civic Accelerator Program

The three challenge statements the Civic Accelerator identified in summer 2016 included:



Challenge 1: Water Usage Data How can Guelph Water Services enable citizens to detect leaks and reduce their water use? Water Services Department



Challenge 2: Parking How can we maximize the value of parking space in the downtown?

Economic Development Department and Transportation Services Department



Challenge 3: Statutory Notices How can we make it easier for the public to provide feedback on planning decisions? Clerk's Office and Planning Services Department ⁷ Two companies were selected to embed within the City of Guelph:

Challenge 1: Alert Labs, a hardware company that has developed a "Fitbit® for your water meter," a sensor which provides real-time data on residential water usage.

Challenge 3: Milieu, a startup that has developed an interactive platform to facilitate public discussion about urban planning decisions.

No project team was selected to focus on Challenge 2. For more details, please see Page 15.

For both Challenge 1 and 3, the four-month embed period has been extended, and the City has now finalized paid pilots with both firms.

Milieu will continue to embed with the City's Planning and Development Department, during which time all of the City's development planning files will be hosted on Milieu's platform, complementing the City's other consultation tools and methods. This paid pilot will enable the City to determine whether it wants to become an official enterprise subscriber to Milieu.⁸

Public purchase of Alert Labs' Flowie Water Sensor Kits has been incorporated into the City's suite of water efficiency rebates; for the first 600 purchases of the sensors, the City will provide a \$50 rebate. In order to qualify for the rebate, people are required to share their addresses and provide data on their water usage. The City has also purchased 10 devices directly from Alert Labs for use in its own facilities.

Both paid pilots are explicitly data-driven; by continuing to work closely with these two companies, the City will be able to make more informed decisions on important policy issues.⁹



HAS THE CIVIC ACCELERATOR PILOT ACHIEVED ITS GOALS (SO FAR)?

Without counterfactuals, we cannot definitively say whether the solutions that have been co-developed through the Civic Accelerator are more effectively addressing the challenges than market-ready solutions sourced through traditional procurement would have done. However, we can point to some indicators to suggest that the Civic Accelerator has achieved its goals so far.

Redesigning procurement in order to improve the delivery of public services

Emily Stahl, Manager of Technical Services (Interim) with the Water Services Department, has explained that while the Department provided parameters for the type of solution for which it was looking, she was impressed by how well Alert Labs' product responded to their "niche problem."¹⁰ For example, the product provided more advanced capabilities than they had originally considered, such as creating a "normal use" profile based on an individual's water usage with real-time data." Without the Civic Accelerator pilot, the Water Services Department would not have been aware that the company, or the product, existed.¹²

Ruth Casselman, VP Operations and Co-Founder of Alert Labs, has explained that the City has been instrumental in helping Alert Labs develop a calibration system for residents' unique water flows.¹³ Instead of making assumptions based on the typical size of residential water pipes, the company has developed a user-friendly way for residents to install their Alert Labs devices, take readings, and then compare up-to-date information against the City's data, which has enabled Alert Labs to make their product more accurate and effective.¹⁴ Evidently, the more customized product developed during the embed period is superior to what the department could have procured using a traditional approach.





The co-development process with the Milieu team has also enabled the City to explore and test new methods to public consultation. In considering how to make it easier for the public to provide feedback on statutory notices, Milieu's interactive platform offers a responsive and nuanced approach to the consultation experience for development planning projects in Guelph.

Since the platform enables people to provide real-time feedback about developments in their neighbourhoods, Milieu has access to real-time data on the platform's use. The company has been able to integrate what they have learned into subsequent iterations of the platform, thereby improving their product. This constant iteration would not have been possible using a traditional procurement approach, where a ready-made platform would have been sold to the city without the opportunity to evolve it through a codevelopment process.¹⁵

More broadly, Sam Laban, the Guelph Lab Facilitator, has explained how the creative tensions between startups looking for commercialization opportunities, department managers, and the procurement team at the City has led to the development of an organic innovation space.¹⁶ Laban has also highlighted that, from the City's perspective, an embed period allows for data collection through experimentation, which is critical for informed decision making — and informed purchasing.¹⁷

Creating more commercialization opportunities for early-stage companies

Given the numerous barriers that early-stage companies face, the Civic Accelerator RFP process has been positively received. Neither Alert Labs nor Milieu had responded to a public RFP prior to the Civic Accelerator program, so the program is evidently attracting the intended audience.

Responding to public RFPs can present a number of challenges for early-stage companies. Many companies are unaware of the opportunities that exist, as receiving information about public RFPs can require registering for certain websites, and some of these sites charge a fee. Access is a barrier, as is the time commitment that responding to an RFP requires. As a result, small companies that are prioritizing product development may not be able to devote requisite resources to what can become a lengthy process.

Furthermore, it can be challenging to know exactly what the government is looking for. The traditional procurement process leaves little room for communication, nuance, and innovation. The RFP may describe a product that is not a precise fit for the company, making it difficult for companies to determine whether submitting a response is worth





their time. Moreover, companies that have experience working with governments generally have an advantage over companies that do not, so it is challenging for new firms to break into public markets. Lastly, the long sales cycles in the public market make this avenue less attractive for early-stage companies, as they rely on more stable revenue streams.

Both of the companies have stated that the opportunity to work directly with the municipal government and embed within specific departments were strong draws to the Civic Accelerator program. Even though the businesses are progressing through different stages of development – with Milieu focused on refining and customizing their platform and Alert Labs focused on entering new markets – the Civic Accelerator was able to provide the support and mentorship each company needed.

For example, through its experience with the pilot, Alert Labs has considered entry into commercial markets much sooner than anticipated. Initially, the company had been focused on the residential space. During the embed, they tested their product in commercial buildings, such as the local ice rink. As a result, Alert Labs found themselves conducting valuable research, like figuring out how much water it takes to fill up a Zamboni, in order to maximize the benefit their product provides. While selling in commercial markets was always of interest, the embed with the City laid the groundwork for this market expansion.¹⁸

From a product development perspective, the Civic Accelerator has enabled Milieu to conduct user research sessions, host popup engagements, and attend and contribute to departmental meetings, all of which have directly informed the evolution of their platform. The platform is accessible to members of the public, real estate developers, and engineers, and their use of the platform is helping inform the Milieu team's cuttingedge research on natural language processing and cognitive computing.¹⁹ Participating in the Civic Accelerator pilot has enabled Milieu to further build out their platform in a supportive environment, make connections to mentors and investors, and deliberately plan for future business development.²⁰ In short, Milieu has been able to use the Civic Accelerator pilot to develop solutions that are "general enough to sell elsewhere but specific enough to be useful (to the City of Guelph)."21





HOW TO CREATE A CIVIC ACCELERATOR, GUELPH STYLE

We asked for key insights on how the Civic Accelerator team was able to make this alternative process work. Here is what we gleaned:

Work within the bounds of existing procurement regulations and protocol

The Civic Accelerator team has deliberately aligned the redesigned procurement process with established legal protocol at the City. The Civic Accelerator pilot project abides by the City's existing RFP procedure and is subject to the same rules and regulations, including the Purchasing By-law. As a result, purchases facilitated through the Civic Accelerator are not constrained by the single sourcing limits placed on individual departments.ⁱⁱ

During their inaugural cohorts, the cities of Amsterdam and San Francisco, which have run programs similar to the Civic Accelerator, experienced challenges when trying to make a purchase after the embed period. As a result, these cities advised Guelph to integrate the Civic Accelerator program with the RFP process, as it would enable the smoothest option for purchasing. Competitive bidding processes are designed to protect against individual companies gaining unfair competitive advantages over others, including provisions that exclude companies from bidding if it is deemed they have materially influenced the terms of the RFP.²² Thus, by running a competitive bidding process at the outset of the Civic Accelerator process, there is no concern about the embedding companies having an unfair advantage over other companies, regardless of the final cost of the co-developed solutions.ⁱⁱⁱ

Moreover, thanks to a "piggyback clause," an aspect of provincial procurement law that the City of Guelph has enacted through its by-laws, other cities can purchase goods and services developed by companies that have completed the Civic Accelerator program without having to run their own competitive bidding processes.²³ In this way, it is a mechanism that enables shared purchasing and makes agile procurement, above individual departments' single sourcing limits, possible. The piggyback clause is also beneficial for early-stage companies, as it provides them with the opportunity to potentially secure more than one municipal customer.²⁴



As per the Purchasing By-Law, the City of Guelph has a limit on purchases that can be made by an individual department without having to run a competitive bidding process. This limit is \$20,000 for goods and \$35,000 for consulting services.

^{III} As explained by the Civic Accelerator team, even if the purchase was under \$20 or \$35K, if it was deemed that the company was materially involved in shaping the terms of the work, the same principle of unfair advantage would apply.



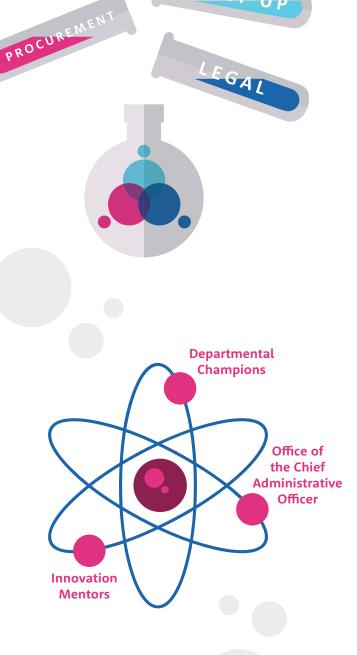
Work closely with legal and procurement teams – relationships matter

Andy Best, the City's lead for the Civic Accelerator program,^{iv} has explained that when experimenting with new and out-of-the-box approaches, you need "robustness of process – you need to be unimpeachable."²⁵ Thus, the Civic Accelerator worked in synchronicity with the procurement and legal teams; getting the best value for money through a legally defensible mechanism was never overlooked.

Identify champions within government

The Civic Accelerator was strategically launched from the Office of the Chief Administrative Officer, which lent it the credibility needed to move from ideation to execution. Departments also knew they had the support from senior levels of government to try a different approach to procurement.

Also critical was an internal champion to provide "high-level air cover" for different departments. Jeff Campbell, mentor at Innovation Guelph, explained that having someone such as Best – who knew how to navigate a complex organization, recognizing which barriers to step around and which to bulldoze through – was integral to the program's success.²⁶



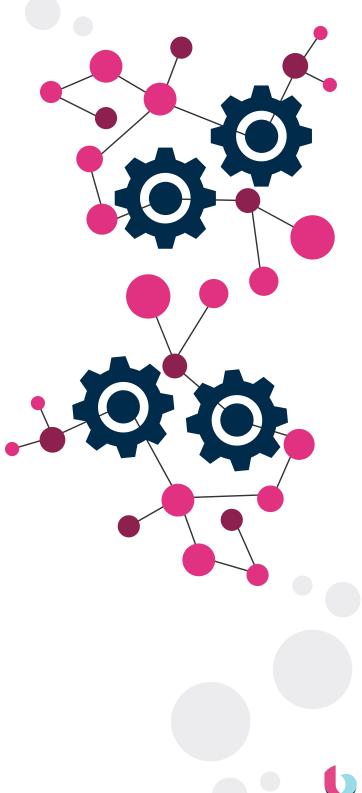
START UP



Identify champions in the local innovation ecosystem

The City's external delivery partners, including Guelph Lab and Innovation Guelph, were also integral to the program's success. The Guelph Lab has a mandate to leverage research from the University of Guelph and apply research to real-life problems. Given the traction this issue had garnered, Laban and his team saw redesigning procurement as one vehicle to realize this mandate and were integral to the Civic Accelerator from design through execution.

Campbell was another important champion. A serial entrepreneur with extensive private sector expertise, he was an important link between the Civic Accelerator and Guelph's innovation community. By accessing the wider innovation community, the inaugural round of the program has laid the groundwork for a proliferation of co-created solutions, developed commercialization opportunities for early-stage companies, and emphasized lessons that are transferable to other municipalities.

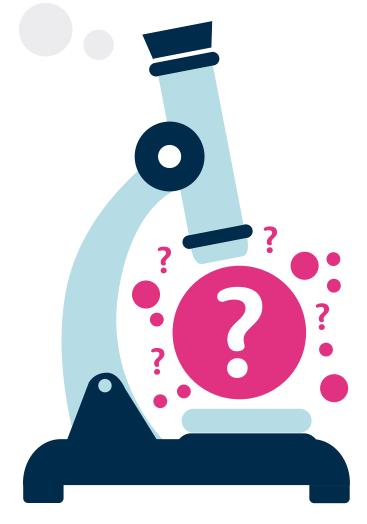




Spend time with departments defining the challenges that need to be solved

The inaugural challenge statements were scoped through an in-depth consultation process. Laban and Best conducted in-depth discovery meetings with departments to identify challenges and determine whether the challenges were suitable for the pilot and if there was requisite buy-in.

While the original intention of the inaugural program was to work closely with three companies on three challenges, none of the pitches that were presented adequately responded to Challenge 2. The City acknowledges this was partly due to the difficulty of scoping a challenge that cut across two departments. The pitched solutions involved infrastructure interventions that required longer timeframes and more financial investment than the pilot program was able to provide. Testing the challenge statements with external stakeholders, including active members of the startup community, prior to launching the challenges may help avoid confusion and frustration in the future.





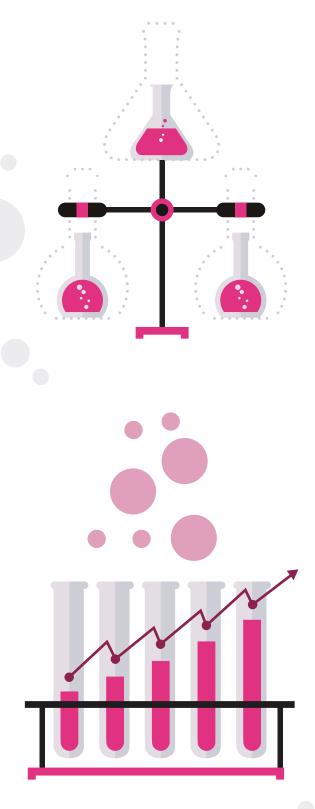
Design your RFP with early-stage companies in mind

While large, more established companies were not precluded from applying to the program, the Civic Accelerator was able to attract smaller companies by thinking through the RFP process from the perspective of a smaller company. For example, having previous experience working with government, a standard requirement in many public RFPs, was de-emphasized in the Civic Accelerator RFP.

Small details also made a difference. For instance, Alert Labs described the videos that were hosted on the Civic Accelerator website as useful and effective – real people talking about real challenges resonated with the company more than reading through a long government document.²⁷ The RFP process also adapted elements of grant applications for early-stage businesses, which focus on the commercial potential of ideas. Finally, influenced by Guelph's innovation ecosystem, pitches were evaluated based on the potential of the ideas, rather than past experience or high-quality marketing.²⁸

Prioritize data-driven policy making

Data-driven policy making is key to meeting the program's objective of delivering better programs and services, which is why the Civic Accelerator is designed with experimentation, iteration and prototyping at its core. The Accelerator allows the departments to collect robust data and learn about what works through experimentation. It "de-risks" the purchasing decision because the idea has been tested in practice.²⁹ Pre-qualifying vendors based on working prototypes is another datadriven model that other governments are exploring.³⁰





BONUS: HOW IT COULD BE EVEN BETTER

Align the Civic Accelerator program with internal strategic planning initiatives and external schedules

In the future, Best says he would consider aligning the program more closely with the City's budget cycle, enabling departments to make a purchase at the conclusion of the embed if they determined that was the best course of action.³¹ Best also stated that it would be advantageous to align the Civic Accelerator's schedule with the incubators at the University of Guelph, so that project teams on campus would be available to apply to the Civic Accelerator.³²

EXTERNAL SCHEDULES INTERNAL STRATEGY

Need to line up more opportunities for funding and financing

Mentors and Civic Accelerator participants alike acknowledge that incorporating guaranteed funding for companies involved in the program would be an important process improvement, as there are both real and opportunity costs associated with the embed, and lack of funding could be a barrier to entry. Alert Labs explained that they were lucky to be in a position to finance themselves, which speaks to the fact that they were already at a certain stage of business development.³³

The Milieu team secured external funding three months into their embed.^v While the

company speaks incredibly highly of the City staff with whom they have been working, they explained that people are now taking them more seriously and that they have been able to develop sustainable budgets, rent their first office space, and plan for the future.³⁴ In fact, Lee-Michael Pronko, Co-Founder and Business Development Lead at Milieu, said he felt like the Civic Accelerator "really started" once this money was secured.³⁵ He also pointed out that the civic tech sector is a lot more lucrative in the United States, making it easier for earlystage companies to grow.³⁶

*They secured \$30,000 from IBM to continue work on cognitive computing at Carleton University and \$30,000 in matching funds through the Innovation Guelph Fuel Injection Seed Funding Program.





YOU HAVE OUR ATTENTION, GUELPH!

The City of Guelph is a trailblazer, an initiator of a long overdue conversation about how public procurement can be improved. The Civic Accelerator project has also shown that companies want to work directly with government, and vice versa.

We are excited to see more experiments emerging across the Canadian landscape, testing new approaches to traditional purchasing, incorporating co-development into the procurement process, and designing these processes with early-stage companies in mind. As more experiments get underway, we are reminded that nothing can be improved if it does not exist in the first place. The "minimum viable product" version of the Civic Accelerator has been a notable success that Guelph and others can build on.

The second round of the Civic Accelerator will launch later in 2017. We look forward to seeing what's in store.



Appendix: Traditional RFP Model vs. Civic Accelerator RFP Model

Both the traditional RFP process and the Civic Accelerator RFP follow these steps:

Must abide by Procurement By-Law

Electronic proposals only-applicants must create vendor accounts in the City's electronic bidding system

Submissions must be made by specific deadline

Vendors are evaluated according to specific criteria, including relevant expertise/experience

Documentation of significant similar projects with project descriptions and client references is required

Traditional RFP only:

Pre-qualification may be required.

Evaluation is partly based on the vendor's detailed understanding of the required deliverables.

Detailed scope of work with strict timelines and parametres are included in the RFP.

The final deliverables are specifically articulated, for example:

- Design and implement a citizen survey and present findings in a report;
- Conduct a background study which requires detailed modelling and calculation of development charges for the City of Guelph, etc.

Civic Accelerator RFP only:

Three challenges articulated, as opposed to a specific Scope of Work (which is far more prescriptive)

Teams or companies selected for the Civic Accelerator are offered the following supports, amounting to a robust incentive package:

- Access to City staff from the hosting department, including departmental staff working on the project and departmental manager acting a lead.
- Professional mentorship and coaching through the City and Civic Accelerator's external partners.
- Technical and strategy support from the City's Department of Information Technology and Innovation
- Workspace (at City of Guelph and with partners). Access to a collaborative workspace inside City Hall for 12 hours per week.

Evaluation is partly based on the vendor's proposed solution and the vendor's capacity to implement and commercialize any solution. This includes a description of the current (or proposed) business model.



Traditional RFP only:

Costs - vendor is required to submit the following:

- A detailed breakdown of any eligible costs;
- Hourly rates for the members of the proposed team; and
- A detailed bid price, including fees for all sub-consultants and their disbursements.

At the conclusion of the traditional RFP process, a vendor is selected to complete the scope of work.

At the conclusion of the specific project, the successful vendor delivers required services and products.

The decision to purchase is based solely on the information contained in the bid.

Civic Accelerator RFP only:

The Civic Accelerator RFP explicitly states this program is to work with entrepreneurs, startups, students and companies (this does not preclude established companies):

- (a) In the Background section: "The Civic Solutions Accelerator is a pilot project that enables the City of Guelph to openly innovate with entrepreneurs, startups, students, and companies to create solutions for complex problems experienced by municipalities globally."
- (b) In the Proposal Contents section, when it asks about qualifications and experiences of project manager and team, the RFP asks for, "A statement about what makes your team/startup/ company exceptional? Why are you the best fit for the accelerator?"

At the conclusion of the Civic Accelerator RFP process, a project team, startup, or company is selected to work on each challenge.

At the conclusion of the Civic Accelerator pilot program, the following scenarios are possible:

- (a) The City department decides to purchase or otherwise invest in the solution and initiates a negotiation to agree a Contract for the purchase.
- (b) Both the successful applicant and department decide to continue partnering in development of the solution (outside and beyond the Civic Accelerator).
- (c) Either the successful applicant or department may decide to end the partnership.



ENDNOTES

- 1. Ministry of Economic Development and Growth News Release, 2017.
- 2. Andy Best, Mid-Point Demo Day, 2016.
- 3. Civic Accelerator website, 2016.
- 4. Ibid.
- 5. Best, Final Demo Day, 2017.
- 6. Best, Mid-Point Demo Day, 2016.
- 7. Civic Accelerator website, 2016.
- 8. Best, Conversation, 2017.
- 9. Ibid.; Sam Laban, Final Demo Day, 2017.
- 10. Emily Stahl, Interview, 2016.
- 11. Ibid.
- 12. Ibid.
- 13. Ruth Casselman, Interview, 2016.
- 14. Ibid.
- 15. Lee-Michael Pronko, Interview, 2017.
- 16. Laban, Conversation, 2016.
- 17. Laban, Final Demo Day, 2017.
- 18. Casselman, Interview, 2016.
- 19. Pronko, Mid-Point Demo Day, 2016; Pronko, Interview, 2016.
- 20. Ibid.

- 21. Best, Mid-Point Demo Day, 2016.
- 22. Laban, Notes, 2017.
- 23. Best, Mid-Point Demo Day, 2016.
- 24. Best, Notes, 2017.
- 25. Best, Conversation, 2017.
- 26. Jeff Campbell, Interview, 2016.
- 27. Casselman, Interview, 2016.
- 28. Best and Campbell, Conversation, 2017.
- 29. Laban, Final Demo Day, 2017.
- 30. Ben Miller, "How Government is Reforming IT Procurement and What it Means for Vendors," Government Technology Magazine, 2017.
- 31. Best, Conversation, 2016.
- 32. Ibid.
- 33. Casselman, Interview, 2016.
- 34. Pronko, Interview, 2016.
- 35. Ibid.
- 36. Ibid.

