EVALUATION OF THE CIVIC ACCELERATOR

Summary

This report summarizes all findings from the evaluation of the first round of challenges in the **Civic Accelerator** (CA). The *primary* purpose of the evaluation is to support future challenges run through the Accelerator or programs like it. This includes challenges in Guelph as well as other cities.

The evaluation is designed to serve people already familiar with the Accelerator. This includes two principle audiences:
- People looking to implement a version of the program and considering changes to the program's design
- People considering participating in the program who want to better understand how it works in theory and in practice

About the program

The City of Guelph, Innovation Guelph, the Guelph Lab, Canadian Open Data Exchange and the Centre for Business and Student Enterprise (CBaSE) launched the Civic Accelerator (CA) in 2016. The CA is a novel approach to procurement, designed to improve the way the City purchases new technology.

The objectives of the Civic Accelerator are as follows:
- Create effective solutions through iterative testing and development
- Reduce the risk associated with complex technology purchases by generating better data to support informed decision making
- Allow municipalities to access novel ideas by creating mutually beneficial partnerships with small and medium enterprises
- Support the development of technology businesses that serve the public sector

The Accelerator is based on challenges — essentially a description of a pressing issue faced by the municipality. Characteristics of challenges include: being common to many municipalities; there being few or no existing solutions on the market; and, there being only limited data on which to make purchasing decisions.

City departments identify challenges, and then issue them as a Request for Proposals (RFP) that focuses on describing the problem and intended outcomes rather than the specifications of any solution.

The City, Innovation Guelph, Canadian Open Data Exchange and CBaSE recruit companies to apply, select a winner, and then the participating City department spends four months working together with the company to develop and test a solution. Innovation Guelph, Canadian Open Data Exchange and CBaSE, provide support to the company, including mentorship, professional services and potentially funding. At the conclusion of this period, known as the embed, three scenarios are possible: the City makes a purchase; the City and company continue to work together or they conclude the partnership.

THE WATER CHALLENGE

Guelph Water Services worked with Alert Labs, a company offering a smart water meter. Water Services currently offers citizens a $100 rebate on purchases of smart water meters that meet industry standards. This is now a permanent program, and is a direct extension of a pilot program launched with Alert Labs. Preliminary data on water conservation has been positive—an average of 18% reduction per household using the Alert Lab device. Alert Labs believes the Civic Accelerator accelerated development of their company by 1 to 2 years.

THE PLANNING CHALLENGE

The City's planning department worked with Milieu, a company developing online and offline tools to support community engagement in land use planning decisions. They worked together for over a year, but the City has not pursued a purchase and the concluded the partnership in November 2017. Instead, the City leveraged existing in-house technology to create an interactive map of current development applications. It is specifically focused on notifying citizens rather than gathering their feedback. Milieu is not currently active and the founders are pursing other projects.

Summary of the 2016 challenges:

The Civic Accelerator launched with three challenges, which were run simultaneously. This first round of challenges were:

- The water Challenge: How can the City of Guelph enable citizens to detect leaks and reduce their water use?
- The planning Challenge: How can the City of Guelph make it easier for the public to provide feedback on planning decisions?
- The parking Challenge: How can the City of Guelph maximize the value of parking space in the downtown?

Of these three challenges issued, only two received appropriate responses. The parking challenge was not pursued. The water and planning challenges were pursued with varying results.

The stated purpose of the Civic Accelerator is to "accelerate development of solutions," and in both challenges solutions have been developed. In the case of water challenge, the solution developed shows early indications of addressing the challenge. In the planning challenge, it is too early to know if the City's own solution can address parts of the original challenge.

Recommendations

Together, the two challenges from the first round of the Civic Accelerator provided a range of valuable insights for future versions of the program. Participants in the evaluation were asked to reflect on lessons learned and to suggest potential changes or improvements to the Civic Accelerator's design. Recommendations can be grouped into five categories:

- Expand the program's role in supporting implementation
- Offer different variations of the embed according to the goals and expectations of the department and company
- Improve support for project management
- Build capacity for co-creation and iterative development
- Refine the selection process

Key Conclusions

The Civic Accelerator shows significant promise. Although the experience and results across the two challenges were markedly different, it's possible to draw a number of conclusions about the value and design of the program

There is a clear need for a program like the Civic Accelerator. Participants in the evaluation were unequivocal: municipalities do need to make purchases that seem poorly suited to traditional models of procurement. The Solution Partners were equally clear about the potential positive impact partnerships of this nature could have for start-up businesses.

It is unclear whether either challenge has provided an archetype for how solutions are developed. Co-creation and iterative development are two features of the Civic Accelerator, but it is unclear if both are equally important. While the water challenge was a successful example of effective decision-making based on iterative testing of a solution, it began with a product that was already ready for market. The planning challenge, by contrast, aspired to co-create a solution from scratch, but failed to employ prototyping and iterative development.

Scaling solutions to other cities has been solely the responsibility of the companies. The possibility of generating additional sales to other municipalities is part of the value proposition for companies participating in the Accelerator. Supporting sales to other municipalities may well help recruit companies for future challenges, but given the nature of these challenges, supporting the speedy adoption of successful solutions would also serve the public good more generally.

Lastly, a successful pilot of the Civic Accelerator was expected to inspire other municipalities and City departments to adopt a similar strategy for procuring services and products. To this end, the Canadian Open Data Exchange is working with the City of Kitchener on an "Open Data Challenge" (which uses a similar approach to the Accelerator), and the City of Guelph has won funding for future rounds of Accelerator-like programs in Guelph, London and Barrie through a three-year project known as the Municipal Innovation Exchange (MIX).

About the Evaluation

In June 2017, Josephine Bamanya was hired on a four-month internship program to lead the evaluation of the Civic Accelerator, with funding from MITACS, Canadian Open Data Exchange, and Innovation Guelph.

The evaluation plan was developed based on a review of documents, consultations with Sam Laban of the Guelph Lab, and with continued guidance and mentorship from Professor Harry Cummings.

Many of the points covered in this summary are detailed in additional reports from the evaluation of the Civic Accelerator. This summary constitutes "Section A," with the other sections as follows:

- Section B: Program Summary. A description of the program, including the logic and assumptions that underpin its design
- Section C: Case Studies. Detailed case studies of each of the two challenges from the first Civic Accelerator
- Section D: Future Program Considerations. A discussion of lessons learned, potential program improvements, and key insights

Copies of these additional evaluation reports are available upon request.

The Program in Theory

This report summarizes specific findings from the evaluation of the first round of challenges in the **Civic Accelerator** (CA). It is focused on describing the program, as well as the logic and assumptions that underpin its design.

For people learning about the Civic Accelerator, the report answers these three questions:
- What is the Civic Accelerator?
- How is the Civic Accelerator supposed to work?
- Why is the Civic Accelerator needed?

For people already familiar with the Civic Accelerator, the answers to these questions can help to ensure alignment amongst those responsible for delivering the program, and guide future evaluations.

This report is one of four that constitutes the evaluation of the Civic Accelerator. Other sections of the evaluation include:
- **Section A: Evaluation Summary**. An overview of all findings from the evaluation.
- **Section C: Case Studies**. Detailed case studies of each of the two challenges from the first Civic Accelerator
- **Section D: Future Program Considerations**. A discussion of lessons learned, potential program improvements, and key insights.

What is the Civic Accelerator?

The City of Guelph, Innovation Guelph, the Guelph Lab, Centre for Business and Student Enterprise (CBaSE) and Canadian Open Data Exchange launched the Civic Accelerator in 2016. The CA is a novel approach to procurement, designed to improve the way the City purchases new technology.

The objectives of the Civic Accelerator are as follows:
- Create effective solutions through iterative testing and development
- Reduce the risk associated with complex technology purchases by generating better data to support informed decision making
- Allow municipalities to access novel ideas by creating mutually beneficial partnerships with small and medium enterprises
- Support the development of technology businesses that serve the public sector

Notable elements of the Civic Accelerator include:

The Accelerator is organized around challenges | A challenge is essentially a description of a pressing issue faced by the municipality. Characteristics of challenges include: being common to many municipalities; there being few or no existing solutions on the market; and, there being only limited data on which to make purchasing decisions.

Focus on intended outcomes rather than the specifications | City departments identify challenges, and then issue them as a Request for Proposals (RFP) that focuses on describing the problem and intended outcomes rather than the specifications of any solution.

Recruitment specifically targets start-ups | The City, Innovation Guelph, Centre for Business and Student Enterprise (CBaSE) and Canadian Open Data Exchange recruit companies to apply. This includes traditional public sector procurement channels (e.g., Merx) but also specifically targets start-ups through relevant networks and social media.

The evaluation committee includes a range of expertise and perspectives | An evaluation committee reviews applications. The evaluation includes representatives from the participating City department, from the partner organizations (for their expertise in assessing technology companies) and a potential user of the solution (this might be a citizen or staff person from another department).
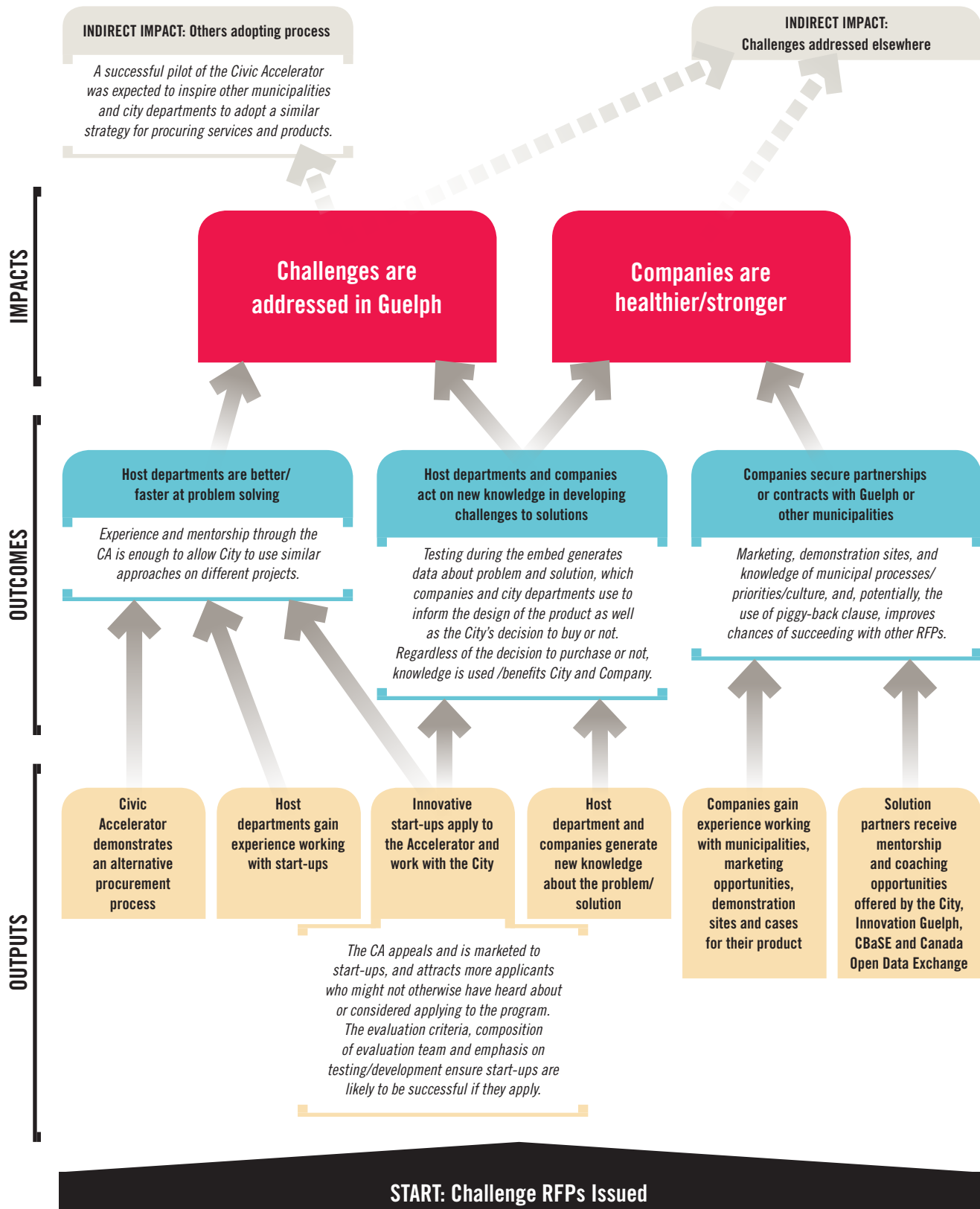
If there are no strong applicants, the challenge will not go ahead | Applications are scored according to the capacity of the team involved, the solution being proposed, the potential business model and the proposed plans for work with the City department. There does not need to be a winner selected and the City can choose not to proceed with a challenge if there are no strong applicants.

The embed is four months of collaborative testing and development | The participating City department spends four months working together with the company to develop and test a solution. Emphasis is placed on testing of solutions with users, which provides valuable learning for both the department and company.

Business supports provided to participating companies | Innovation Guelph, Canadian Open Data Exchange and CBaSE provide support to the company, including mentorship, professional services and potentially funding.

Three possible scenarios | At the conclusion of the embed, three scenarios are possible: the City makes a purchase; the City and company continue to work together; or, they conclude the partnership. If the partnership is concluded, this should not be considered a failure, rather it is one of the advantages of this process — that the city has the opportunity to test and evaluate the proposed product using good data prior to a purchasing decision.

How is the Civic Accelerator supposed to work?

IMPACTS

OUTCOMES

OUTPUTS

INDIRECT IMPACT: Others adopting process

A successful pilot of the Civic Accelerator was expected to inspire other municipalities and city departments to adopt a similar strategy for procuring services and products.

INDIRECT IMPACT: Challenges addressed elsewhere

Challenges are addressed in Guelph

Companies are healthier/stronger

Host departments are better/ faster at problem solving

Experience and mentorship through the CA is enough to allow City to use similar approaches on different projects.

Host departments and companies act on new knowledge in developing challenges to solutions

Testing during the embed generates data about problem and solution, which companies and city departments use to inform the design of the product as well as the City's decision to buy or not. Regardless of the decision to purchase or not, knowledge is used /benefits City and Company.

Companies secure partnerships or contracts with Guelph or other municipalities

Marketing, demonstration sites, and knowledge of municipal processes/ priorities/culture, and, potentially, the use of piggy-back clause, improves chances of succeeding with other RFPs.

Civic Accelerator demonstrates an alternative procurement process

Host departments gain experience working with start-ups

Innovative start-ups apply to the Accelerator and work with the City

Host department and companies generate new knowledge about the problem/ solution

Companies gain experience working with municipalities, marketing opportunities, demonstration sites and cases for their product

Solution partners receive mentorship and coaching opportunities offered by the City, Innovation Guelph, CBaSE and Canada Open Data Exchange

The CA appeals and is marketed to start-ups, and attracts more applicants who might not otherwise have heard about or considered applying to the program. The evaluation criteria, composition of evaluation team and emphasis on testing/development ensure start-ups are likely to be successful if they apply.

START: Challenge RFPs Issued

Why is the Civic Accelerator needed?

The Civic Accelerator was established based on four key assumptions:

ASSUMPTION 1 | Established procurement processes are often a poor fit for municipalities looking to procure innovative technology products and services.

ASSUMPTION 2 | Procurement processes do not provide opportunities for municipalities to test potential solutions before making an informed, data-driven decision about whether to make a purchase.

ASSUMPTION 3 | Technology start-ups are a source of innovative solutions and new jobs, but they tend not to consider government RFPs. This is due to a number of factors: the belief that their inexperience will exclude them from consideration; government contracts are not that attractive to start up companies because of the long(er) sales cycles; start-ups are often hindered by the technical and bureaucratic requirements of these processes (e.g., around liability coverage); and finally, a belief that the working cultures and decision-making processes of the public sector and start-ups are fundamentally different (and often incompatible).

ASSUMPTION 4 | Lack of access to government RFPs can have significant negative effects on rates of success for those start-ups who aim to develop products and services relevant for governments. As a consequence, fewer technologies are available to governments and there is a slower adoption rate for technology within government.

Based on these assumptions, partners in the Civic Accelerator concluded that redesigning or adapting traditional procurement processes can reduce the risk of complex technology purchases for the City and can enhance the creation of viable businesses that serve municipalities.

EVALUATION OF THE CIVIC ACCELERATOR

Case Studies

This report provides details and insights into both challenges from the first round of the **Civic Accelerator** (CA).

For participants in a Civic Accelerator challenge, these cases provide details of the relationship between the City of Guelph and the two companies, including the work completed. They offer insights into what to expect, as well as some potential pitfalls to anticipate.

For organizations delivering a Civic Accelerator program, each case poses some key design questions.

AUTHORS   Josephine Bamanya | Sam Laban

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"How can we make it easier for the public to provide feedback on planning decisions?....

...The Clerks and Planning departments are looking to partner in the development of a solution that makes the public aware of City planning applications and decisions and easy for them to participate in these decisions."

—CIVIC ACCELERATOR RFP

This section of the report details the Planning Challenge from the first round of challenges in the **Civic Accelerator** (CA).

For participants in a Civic Accelerator challenge, this case provides details of the relationship between the City of Guelph and Milieu, and offers insights into what to expect, as well as some potential pitfalls to anticipate.

For organizations delivering a Civic Accelerator program, this case poses some key design questions:
- How should the program assess "readiness" of host departments and solution partners?
- How do sunk-costs and other pressures affect decisions about if and how to continue partnerships?
- Should the Accelerator provide support for project management? What would be appropriate decision-making process at key milestones in the program?

[What did Milieu bring?] *Enthusiasm — they were willing to try and add a bunch of things we hadn't thought of — the sentiment analysis stuff — new ideas, opportunities we hadn't thought of.*

[The] *Accelerator helped with procurement process but didn't help a lot with the project management process.*

…If the City is going … to procure innovation, they need to figure out how to make the Milieu experience feel as smooth to them as Alert Labs did, and acknowledge that a solution is not always going to walk through the front door.

Useful Background

This challenge was initiated by the Planning department (responsible for building inspections and permits, new development, heritage conversation and housing) and the City Clerks Office (responsible for Council, City records and all statutory public notices).

This challenge focused on improving statutory planning notices (signs at development sites, written notices in newspapers, et cetera) and increasing public engagement in land use decisions. It is important to note that this represents two related but slightly different problems.

Milieu was selected as the solution partner — the two co-founders were not working for the company full-time when they were selected, and there were 2 other part-time team members. They were based in Ottawa where they had been contracted to work on a small number of urban planning issues.

Milieu was selected for Accelerator in large part based on their demonstration of their online platform that had been used for a project in Ottawa — the solution provided visual information about the proposed development, as well as tools for gathering and analysing citizen feedback.

In late 2017, the City ended the partnership with Milieu and began developing an interactive online map of development applications in-house. The map was launched in April 2018.

Results of the Planning Challenge

Impacts

Has the challenge been addressed in Guelph?
There is very limited data on the impacts of this challenge. For the elements of the challenge related to the statutory notices, the City Clerk felt that signs at development sites were qualitatively better (more appealing visuals, clearer information), however no data has been collected from citizens, and there is no data on potential increases in public participation.

For the public engagement aspects of the challenge, the City launched an interactive map in April 2018. This was prompted by lessons learned in the Accelerator. The map displays information for all current planning applications. Data about how much the map has been used and user feedback was not available when this evaluation was concluded.

Is the company in a stronger position overall?
By early 2018, Milieu was, according to one of the co-founders, 'sort of in shut down.' One evaluation participant felt they had not found product-market fit, and it's clear the experience in Guelph proved very challenging for the business. The same co-founder is now launching a new business related to civic engagement.

Outcomes

Did the Accelerator develop a solution to the challenge?
The City decided to end its relationship with Milieu in late 2017. Out of the experience however, the City committed resources to develop its own solution in-house. This interactive map was made public in April 2018, and can be seen here. The map aims to improve how citizens are notified about planning decisions, but this evaluation did not establish whether this map will later allow for improvements in how citizens engage with planning decisions.

The partnership with Milieu was predominantly focused on developing a platform that would manage engagement in land use planning decisions, so while Milieu did drive improvements in signage at development sites, their work and was not expanded into written notices.

Has the host department increased its capacity for innovation?
The partnership with Milieu provided the Planning department much needed energy and ideas for an issue that they were struggling to resource and make a priority. The Planning department also felt this was a low risk way to experiment with this topic.

Has the company directly benefited?
Over the course of their time working with the City, Milieu: developed three products/features; incorporated in Ontario; attracted funding; hired staff; and gained recognition as an innovative company.

Outputs

What have the host department(s) and company learned about the challenge and potential solutions?
While the Planning department has committed to the interactive map of current planning decisions, one participant in the evaluation would later reflect that the City had initially set out to learn if it could manage increased public feedback, and that by Fall 2017, that question had still gone unanswered.

Milieu was able to develop three features: Urbot — a data collection tool, a sentiment analysis engine, and a Dashboard. Ultimately these have not become part of a product, and are not elements in the solution implemented by the City.

While the evaluation was not able to establish whether these decisions reflect hard won lessons learned through the Accelerator, it is important to note that not implementing solutions or features remains an important and valid outcome for the City.

Did the host departments gain useful experience working with start-ups? Did Solution partners gain experience working with municipalities, marketing opportunities, and demonstration sites for their product?

Different perspectives on the nature and scope of work that would be done during the Accelerator created significant difficulties. In particular, there was ambiguity about whether Milieu was going to adapt an existing product (based on the platform they had used in Ottawa) or whether they would be testing and developing new features and solutions.

There appears to have been quite differing working styles, which proved hard to reconcile. There was clear frustration on both sides (City, Milieu) about how the project was managed, with contrasting approaches to resolving ambiguity about the project. Ultimately, both the City and Milieu believe the working relationship became one of traditional vendor and client, and neither side felt the project had demonstrated the iterative approach development intended by the Accelerator.

Questions were raised about whether the Planning department and Milieu were for the Accelerator. Specifically:
- There were concerns about Milieu's project management skills — one evaluation participant commented that Milieu "couldn't command [the City's] attention" and showed "poor management of resources," while others felt Milieu's workplans weren't helpful. This challenge revealed some clear financial constraints that could be common to many start-ups.
- The Planning department wasn't able to commit the staff time Milieu had expected, and other priorities may have influenced decision-making about the project.

Together, these factors contributed to a number of significant deadlines being missed throughout the project. These missed deadlines raised concerns about accountability and project management in the Civic Accelerator.

Did solution partners receive business mentorship and coaching?

The team at Milieu noted that the time allocated for the mentorship, which consisted of approximately two hours a month, was insufficient to assist in developing a solution. In addition, while Milieu needed mentorship, its Ottawa base made regular follow up difficult.

Timeline of the Planning Challenge

Scoping The Challenge: April to May 2016

This challenge initially involved two departments, each with related but potentially different areas of focus. From the point of view of the City Clerk's department, this challenge was primarily about improving statutory planning
notices (this includes letters to residents, signs at the site where development is planned, as well as notices in local newspapers). These statutory notices, whilst compliant with legislation, are full of legal jargon and are not clear or informative to the public. The Clerk's department saw this as a democratic deficit — undermining faith in the City's capacity to operate effectively. From the point of view of the Planning department, the challenge was to find a better approach to community engagement in planning decisions. The Planning department was most interested in engaging those living in close proximity to the site in question, and the goal was to reduce confusion about the process, and improve both the quality of feedback they received and the efficiency with which feedback was gathered (the current practice is to mail letters to residents in the immediate vicinity of the site).

Selection: May to July 2016

There were four applicants for this challenge. After two rounds of discussion, plus presentations from the 3 short-listed applicants, the evaluation committee unanimously scored Milieu the winner. Of note, Milieu was actually ranked third in initial scoring, and was almost not shortlisted. Despite positive impressions of the concept they presented and the team's knowledge and clear passion for the topic, committee members were concerned about the founders' lack of experience and were uncertain about their plans for funding participation in the Accelerator. Concerns were largely about the business rather than the ideas being proposed. Given that initial scoring was reasonably close, Milieu was invited on the strength of their idea and passion for the issue, allowing the committee an opportunity to clarify funding arrangements. After presentations from the shortlisted companies, the committee agreed Milieu was the strongest candidate.

Milieu was actually ranked third in initial scoring, and was almost not shortlisted. Despite positive impressions of the concept they presented and the team's knowledge and clear passion for the topic, committee members were concerned about the founders' lack of experience and were uncertain about their plans for funding participation in the Accelerator.

Milieu's success was in part based on their demonstration of the platform they had used in Ottawa, which had provided visual information about the site and the proposed development, as well as tools for gathering and analysing citizen feedback. Evaluation committee members believed Milieu's product was more fully developed than their application had suggested. One member of the committee had a further follow-up call with them to make certain of lingering doubts about whether the founders' would be receptive to mentorship/coaching and their funding arrangements. Ultimately, these concerns were eased and Milieu was invited into the Accelerator.

Embed: September 2016 to January 2017

Workplans were a requirement of the legal agreement signed between Milieu and the City. Staff from the Planning department felt that they should have participated more fully in developing the workplans. Time constraints and competing work priorities limited their involvement at this stage however, and would throughout the project. The City Clerk's Office had been heavily involved with scoping the challenge and selecting Milieu, but their involvement tapered off fairly quickly as Milieu's proposed solution appeared to be more aligned to public engagement.

There are stark differences in how people understood the nature of the work that would be done.

Finalizing the workplans was largely left to Milieu and the Accelerator program manager. As a consequence, the Planning department felt some uncertainty throughout the project about the goals, scope and nature of the work to be done. This was reflected in their comments about the embed, which they described as a series of meetings to plan the work rather than it being a period of actually testing and developing a solution.

Overall, participants in the evaluation understood the partnership with Milieu in one of two ways. Some participants believed Milieu would be largely adapting the existing platform used in Ottawa to fit Guelph's own data sets and needs. Others, by contrast, believe the intent was to co-create a solution — creating new platforms, features, applications, et cetera. Milieu felt their role was to bring "ideas to the challenge and we thought that we were to sell the ideas to the City but not to develop the solution."

Ultimately, there were stark differences in how people understood the nature of the work that would be done and this uncertainty would significantly influence the project.

We brought ideas to the challenge and we thought that we were to sell the ideas to the City but not to develop the solution.

One key idea developed during the embed was the idea of sentiment analysis — that is, using machine learning and artificial intelligence to analyse feedback from citizens. Some participants in the evaluation saw the development of this as an important achievement, and a valuable feature of Milieu's product. City staff appear to have seen this as an interesting idea, but not one they considered a priority.

Despite the work on sentiment analysis during the embed, only limited progress was made towards a complete solution for Guelph. A number of challenges surfaced during this time that appear to have persisted throughout the partnership, and would ultimately limit its success.

Planning department staff had competing priorities and did not have adequate time to devote to the project. They felt they were participating in their free time

Firstly, it was clear Planning department staff had competing priorities and did not have adequate time to devote to the project. They felt they were participating in their free time.

Secondly, the City and Milieu couldn't reach agreement about which planning data sets were needed for the solution. Milieu felt they weren't able to access all the data they needed, while the City was reluctant to gather and share the data without knowing why Milieu needed it. One practical roadblock for data sharing was that the existing database used by the Planning department was less sophisticated than the one Milieu had accessed in Ottawa. (Note: The City of Guelph is now in the process of developing a complete upgrade to Amanda — the system they use to manage planning data).

Thirdly, there were some concerns about Milieu's project and time management experience — City staff felt meeting requests were often made on short notice, and felt Milieu had unrealistic expectations about how quickly they (the City) could complete tasks. Again, this may have reflected the ambiguity about the level of staff commitment expected.

Lastly, while the Milieu team did make frequent visits to Guelph, the embed — where they would work at City Hall, alongside staff, never happened. This was part of early plans, and Milieu had expressed interest in this, but City staff speculated that not being present more often may have slowed progress and, especially later in the partnership, reinforced the idea of Milieu as an outside consultant rather than a partner jointly developing a solution.

During a public demonstration event in February 2017, Milieu was to present prototypes to the City and the public. Given the above constraints, the presentation focused largely on their work in Ottawa with little, if any, reference to work specific to Guelph.

Extending the Partnership: February to July 2017

Between January and March 2017, Milieu and the City agreed to extend the partnership. For the City, the decision was partly tied to an on-going and substantial review of the planning process (known as the "I.O.R."). The work with Milieu was seen as a potential win for the review. At this stage, Milieu felt the nature of the project had changed significantly. The City was now asking for an enterprise-wide, bug-free solution, and this represented not only a change in expectations but a change in workload. Milieu did not feel the fees previously agreed upon reflected these new expectations. These differences are detailed below, but Milieu agreed to continue despite these concerns in hopes of securing a sale and of demonstrating an alternative approach to civic-tech software development — engaging citizens early rather than simply choosing a technology and presenting it to them. All participants in the evaluation questioned the decisions taken at this key moment in the project.

> *At this stage, Milieu felt the nature of the project had changed significantly… that the City was now asking for an enterprise-wide, bug-free solution.*

During this period, Milieu secured two valuable business benefits. In February, Innovation Guelph awarded Milieu $30,000 funding through their Fuel Injection program. In March, Milieu won an entrepreneurship competition and the chance to compete in China for a larger prize.

By April 2017 a new workplan had been agreed with the City, targeting completion of a pilot solution by July 1st 2017 and with the goal of presenting the solution to Council later in July. Milieu also received their first funding from the City. While largely focused on public engagement, this new workplan included $5000 for work related to the signs posted at development sites.

Milieu developed a template for these signs, and the City Clerk's Office felt Milieu had driven significant improvements. While the Clerk's Office had hoped the Accelerator would lead to similar changes in written notices and print advertisements, they also recognized that the bigger problem was Planning staff need more robust process for managing land use planning processes. They also recognized that Milieu's proposed solutions were more aligned to this need, but suggested it would be helpful to have a clearer process for determining how multiple problems may or may not be combined into one solution from one vendor.

During this time, the City's involvement was expanded to include a member of the IT department who worked with the Planning department to support their IT needs. Like the Planning department, the IT department believed the goal of the project was to adapt the platform used in Ottawa, that the adaptation would be largely driven by the data sets available in Guelph, that the adaption would be relatively straight forward, and that end result would represent a quick win for the City. Although Milieu agreed to this new work-plan, it represented a dramatic departure from their original understanding of the project.

During this period of the partnership, ambiguity about the nature and goals of the partnership began to present real challenges. Milieu continued to develop unique, interesting features that the City did not believe were priorities — in fact, they felt these were distractions. There was tension over decisions about whether to create a separate mapping feature or to work from the City's existing mapping ("GIS") system. Although Milieu's co-founders remained ever-present with the project, there were a number of changes with other members of their team, including with technical staff. This may have contributed to further delays in the City actually seeing and using demos of a purpose-built platform for Guelph.

The new agreement and workplan appear to run counter to the idea of co-creation and the iterative approaches to decision-making and development intended by the Accelerator. Firstly, rather than test the solution with a small number of planning applications, all types of planning applications were to be included as part of the system Milieu was building. Secondly, work focused on developing the internal City-facing part of the application before any interaction or testing with citizens. One participant in the evaluation would later reflect that the City had initially set out to learn if it could manage increased public feedback, and that by Fall 2017, that question had still gone unanswered.

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This period of ambiguity affected the working relationship between the City and Milieu. Milieu struggled to meet City deadlines, there was frustration on both sides about access to data (Milieu repeatedly asking for data, while the City, without seeing demos of the platform, was unclear why they needed the particular data sets), and the apparent lack of demonstrable progress toward a product began to erode the City's faith in Milieu. The July 1st deadline for completion of a Guelph demo (and therefore a demonstration to Council) was not met.

Extending the Deadline: July 2017 to October 2017

Despite the missed deadline, the Planning department and Milieu agreed on a revised scope of work in July 2017. Tasks in the new workplan were expected to be completed by September 2017, and the solution was to be launched to the public in October 2017. Milieu was to receive a further $2500 from the City for work related to GIS information. The evaluation did not establish why the project was extended or whether the additional funds were paid out, but one participant expressed frustration at the apparent lack of accountability for the delays.

Frustration continued to grow on both sides. There were further disagreements about access to data, a feeling that Milieu consistently missed deadlines without accountability, and a sense that the relationship had become one of traditional vendor and client — Milieu worked off-site, would be given tasks and then expected to come back to the City once they had completed them.

By September 2017, the work was still on-going. A dashboard developed by Milieu for Planners to manage applications still had bugs that needed to be resolved.

Final Decision: November 2017

In early October, the product was still not ready and ultimately was not launched or tested with the public. Interviewees remained hopeful of the project succeeding but there were now significant concerns. Given persistent issues in developing (and de-bugging) the staff-facing part of the product, City staff expressed concerns about how well the citizen-facing portion would work once released — even as a beta test.

By November, the City took the decision to not move forward with the product and to close out the contract with Milieu. The City would instead develop an app in-house based on the ESRI system the City already uses for GIS applications.

In April 2018, the City released an interactive map that can be seen here. The evaluation did not establish whether this map will also allow for online feedback or public engagement in the future.

Milieu has not taken on other projects, and as of April 2018, one of the co-founders was in the process of launching a new business — one that was focused more broadly on public engagement for municipalities. It will focus on both designing engagement processes, and, where necessary, developing technology.

This section of the report details the water challenge from the first round of challenges in the **Civic Accelerator** (CA).

For participants in a Civic Accelerator challenge, this case provides details of the relationship between the City of Guelph and Alert Labs. In particular, it offers insights into what to expect beyond the embed period of the Accelerator.

For organizations delivering a Civic Accelerator program, this case poses some key design questions:
- Participants in this challenge made decisions based on iterative and incremental testing, but was co-creation also part of this challenge? And, how did Alert Labs already having a product in development affect the outcomes?
- What does this case study suggest about the timeline for the Civic Accelerator, as well as the program's role in the implementation of solutions?

Useful Background

This challenge was hosted by Guelph Water Services ("Water Services") – which is responsible for drinking water, source water protection, stormwater management, wastewater and water conservation.

The challenge focused on improving leak detection and increasing water conservation in resident's homes.

Alert Labs was selected as the Solution Partner — founded in 2015, they are based in Kitchener, have less than 20 employees, and were part of a separate business development program in Kitchener when they applied to the Civic Accelerator.

Alert Labs' solution is called "flowie" — which they refer to as a "Fitbit for water meters." It provides real-time alerts to leaks and high water use, as well as smartphone apps for tracking water use, and tracking potential leaks. The device is installed by customers directly onto their water meter, and has its own cellular data connection. A second device, "floodie," is placed on the floor near common places where leaks happen (in basements, next to water heaters etc). Floodie links remotely to flowie.

Both devices were available commercially when Alert Labs applied to the Civic Accelerator.

Water Services currently offers citizens a $100 rebate on purchases of smart water meters that meet industry standards. This is now a permanent program, and is a direct extension of a pilot program launched with Alert Labs.

Preliminary data on water conservation has been positive — an average of 18% reduction per household using the Alert Lab device. Alert Labs believes the Civic Accelerator accelerated development of their company by 1 to 2 years.

Results of the Water Challenge

Impacts

Has the challenge in Guelph been addressed?
Water Services currently offers citizens a $100 rebate on purchases of smart water meters (like Alert Lab's device) that meet industry standards. This is now a permanent program, and is a direct extension of a pilot program with Alert, which had been extended twice.

As of Feb 2018, approximately 50 Alert devices had been sold. Low take-up is partly attributed to limited promotion (Water Services had not planned on a program launch for 2017). Water Services had targeted 100 units sold before making a decision about the effectiveness of the product and rebate program, but felt preliminary data was strong enough to expand the program.

Water Services is also using Alert Lab's device to investigate residents' high water bills, and the City is using devices on its own facilities.

Water Services felt their work with Alert had primarily addressed the water conservation aspects of the original challenge statement, but that they had not made as much progress on leak detection and flood warning, which were also part of challenge. This was despite the fact Alert Labs does offer a leak detection product.

Is the company in a stronger position overall?
Alert Labs believes the Civic Accelerator accelerated development of their company by 1 to 2 years –the program has offered credibility, and led to product developments and changes to their business model (by including commercial property managers, like Facilities Management departments in Municipalities, Alert Labs has doubled their potential market).

Outcomes

Did the Civic Accelerator develop a solution to the challenge?
Preliminary data on water conservation has been positive — an average of 18% reduction per household using the Alert Lab device. Water Services would like more

data before feeling confident in these figures — for example, adjusting for seasonal variations in water use and year over year comparisons, as well as accounting for the early adopters who are likely to be more active than the general population in reducing their consumption.

It's important to note that both devices were available commercially when Alert Labs applied to the Civic Accelerator. Despite this, both Water Services and Alert Labs felt the embed led to improvements in the device. Rebate programs are not novel, but Water Services had not used one for water meters before, and it was a novel program for Alert Labs.

Has the host department increased its capacity for innovation?
Water Services does not believe the same result could have been achieved with traditional procurement. It wasn't clear to them before the program what technical specifications they would have needed, and despite market research they were not aware of Alert Labs. Water Services was particularly impressed with Alert's meter system — it was easy to install and not invasive (it did not interfere with plumbing or require a plumber). Further, Water Services felt they were able to influence the design of the product. Overall, Water Services would participate in the Accelerator again. They believe it is not unusual to for them to have challenges that they can't set specifications for, and could identify at least one other challenge they are currently facing that would be a good fit for the Accelerator.

Has the company directly benefited?
While sales in Guelph were limited, Alert Labs believes the program has directly benefitted them in sales and partnerships with other municipalities — Welland is now offering a similar rebate, and Kitchener, Region of Waterloo, Vancouver, Niagara, Tecumseh have all purchased Alert devices to use in their own facilities. Alert Labs also felt the City's implicit endorsement of their product was valuable marketing tool.

Outputs

Did the host department(s) and company learn about the challenge and potential solutions?
The experience has affirmed Water Services hunches about behaviour change as a strategy. They feel increasingly confident that behaviour change can generate water savings. More specifically, they feel confident that providing information and awareness alone is likely not enough to affect behaviour, and that they will need to engage with the range of potential motivations to reduce water use. This includes the use of challenges, comparisons and competition, and inspiring messages, et cetera, particularly when targeting residents who are not already highly motivated to conserve water.

Together, Alert and Water Services were able to test the accuracy and reliability of the device across a range of water meter types and different kinds of installation locations. As a consequence, Water Services felt confident in the device, and Alert was able to quickly confirm a number of assumptions they had made about the devices' accuracy.

Did the host departments gain experience working with start-ups? Did Solution partners gain experience working with municipalities, marketing opportunities, demonstration sites for their product?

There were some issues related to project management and differing working styles. Timelines and approval processes were longer than Alert would have liked, but importantly, this was something Alert had expected and simply had to adjust to. It is worth noting that with experience working at large private enterprises, Alert sees this not as an issue of start-ups versus governments but of start-ups versus any large organization. For Water Services, they would have liked clearer work plans and task assignments.

Did solution partners receive business mentorship and coaching?

Alert Labs was based at the Accelerator Centre in Waterloo, which supports start-ups. Alert already had access to mentorship and office space through the centre, and did not feel they needed the additional supports offered through the program.

Timeline of the Water Challenge

Scoping The Challenge: April to May 2016

Water Services were the sole hosts for this challenge. The challenge was focused on residential water use, and there were two elements to the challenge — leak detection and water conservation. Water Services' interest in leak detection was prompted by a large number of frozen water pipes during winter 2014/15 and customer service complaints related to large water bills. Water services' own water conservation targets, as well as requests for support from citizens looking to reduce their water consumption prompted the interest in water conservation. Market research conducted for Water Services suggested there were no affordable, consumer-facing solutions already on the market.

The challenge statement reflected the focus on water conservation and leak detection, and included the following intended outcomes:
- Reduce average residential water use in Guelph by 10L per day
- Reduce damage and wasted water due to undetected leaks
- Reduce billing disputes caused by undetected leaks, particularly for multi-resident buildings

On reflection, the Water Services department felt that they had achieved more on water conservation, but less on the frozen pipes part of the challenge. Water services also felt it was difficult to find a balance between being too specific and too broad in the description of the challenge.

Selection: May to July 2016

There were five applications to this challenge. Alert Labs was initially scored either best or second best by every member of the evaluation committee, and was one of three companies shortlisted. During the initial scoring, the evaluation committee reviewing applications for this challenge noted that the scoring criteria seemed to favour more established products — those that were closer to market. The Water Services department would later comment that they were looking for a solution ready for market. After the shortlisted companies presented, the evaluation committee increased their scores for Alert Labs, while the other companies' scores all decreased. On reflection, Water Services felt ease of installation for the proposed solutions was the most significant criteria for them. Easy installation for Alert Labs' meter was a major success factor in their bid, however it is important to note that this was not an explicit or formal part of the RFP evaluation. It is unclear whether ease of installation was a factor that should have been added to the challenge, or whether it actually a lesson learned as a consequence of the Accelerator.

Embed: September 2016 to January 2017

The embed period centred on testing the flowie devices in selected residential homes (three homes in total), city facilities, and several businesses — including a restaurant. The Civic Accelerator program split costs with Water Services for the purchase of a small number of flowie devices.

Both Alert and Water Services identified a range of benefits that came from the embed:

- They felt that the flowie device was improved. They were able to test its accuracy and reliability across a range of water meter types and different kinds of installation locations. As a consequence, Water Services felt confident in the device, and Alert was able to quickly confirm a number of assumptions they had made about the devices' accuracy. This faster validation reduced "time to market" and was seen as an important benefit by Alert.

- Water services used the device with a local restaurant that was experiencing large unexplained water bills. They used the device to locate the leak (a faulty ice machine), which resulted in savings of $500 per month for the business. It also resulted in Water Services purchasing devices to use itself for resolving bill disputes; Alert Labs uses this example in their marketing and sales materials.

- Water Services also used devices at City facilities, including at the Sleeman Centre, which is a large sports and entertainment venue. This was a new application for the device, and represented a significant change to Alert's business model. Water Services later bought 10 additional flowie devices to use at key facilities, and by working with commercial property owners in this way Alert believes they were able to open up a market that they hadn't gone to yet. They had assumed that this might happen in the future, but the embed allowed them to confirm the potential, which has doubled their potential market.

Project management during the embed was largely organic. Water Services believed that Alert Labs took the lead but that it was somewhat unstructured — each side calling meetings as needed, and despite the work plan, tasks and assignment of responsibilities were not always clear.

Alert Labs believed the Accelerator had potential for huge impact on their company, and were willing to make it the major focus for the company. The embed granted them access to the City that they wouldn't have been able to get otherwise, and there was enormous marketing value in having a municipality vet their technology.

At the conclusion of the embed, Water Services believed the partnership had yielded a promising solution to the challenge, and that they could confidently recommend the product to residents. In January 2017, Water Services and Alert Labs agreed to launch a pilot rebate program.

Piloting: February to December 2017

Having agreed in early 2017 to launch a rebate program there was a significant delay in signing a contract. Alert Labs found the delay from the end of the embed in January 2017 to decision making and issuing of the contract agreement from the City in July to be overly long and demotivating. The delay was attributed to both lengthy internal approval processes at the City, and changes in staff at Alert and the City (particularly in the City's legal department, and once the new person was hired, the agreement was signed within days.)

In July, the contract was agreed and the first 600 Guelph residents would receive a $50 rebate against the $299 cost of a flowie and floodie package offered by Alert Labs. Alert Labs was responsible for costs related to media for the program launch – including radio ads, and a display at a local Canadian Tire store — with in kind contributions from the City including a press release, some social media promotion, a Facebook ad, and a video with the Mayor. Alert Labs was keen to include promotional materials in hydro bills, and thought this would drive sales, but it wasn't possible.

Water Services staff said that the initial target was to have 300 pairs of devices sold by the end of October 2017. Water Services wanted data on whether residents reduced water consumption, and had targeted at least 100 pairs of devices sold before making a decision about the effectiveness of the devices and rebate program. By Fall 2017, only 13 devices had been sold.

In their interviews, both Alert Labs and Water Services attributed low uptake of the program to the minimal promotion it received. Water Services had not planned for a full program launch — and both Alert Labs and Water Services believe some planning for roll out of solutions ought to be part of the Accelerator. Other potential barriers to sales were suggested. Market research commissioned by Water Services suggested that, in general, residents already felt they were conserving water and therefore may not see the need for further conversation efforts (like purchasing a meter); other evaluation participants also raised the question of sticker shock — that the initial cost ($299) may dissuade some residents from purchasing the devices.

By November 2017, and as a direct result of the Guelph program, Alert launched a similar program with The City of Welland. The rebate was set at $100, and the starting price was lower (offering the metering device Flowie only rather than the Flowie and Floodie flood detection device as they had in Guelph). Sales in the first week of this new program were higher than the first 6 months in Guelph.

The Guelph Corporate Energy Division — which is responsible for paying the costs of water at City facilities — also agreed to purchase six flowie devices from Alert Labs. One of the Corporate Energy Division specialists had experience with a similar device used to measure electricity, and because of this experience, was in favour

of applying a similar concept to water flow. Alert believes having Guelph's stamp of approval was key in being able to talk with other municipalities and led directly to similar sales with the Region Waterloo, City Kitchener, Tecumseh, Niagara, and Vancouver.

Final Decision: January 2018

In January 2018, sales for the rebate program in Guelph were in the region of 50 to 60 units. This was less than had been hoped for, with Water Services having targeted 100 units sold before making a decision about the effectiveness of the product and rebate program. Estimates for water savings were positive however, with an average of 18% water savings for those using the device. Although Water Services feels that additional data — e.g., year over year — is needed before feeling confident in this figure, they felt this preliminary data was strong enough to proceed. They also found particular value in being able to recommend a specific product they have tested to citizens.

The rebate program was made permanent in early 2018, with an increase in the rebate to $100. It was also opened up to a range of products, such that the program is not restricted to Alert Labs — any product that meets industry standards is eligible for the program. Alert's devices continue to be used by the Corporate Energy division (to monitor and reduce water use at City facilities), and by Water Services as part of their process for dealing with high water bills and large water consumers. For example, Water Services planned to be install one flowie device is at a large local factory.

Importantly, the experience has affirmed Water Services hunches about behaviour change as a strategy for water conservation. Specifically, they feel increasingly confident that: behaviour change can generate water savings; that knowledge/awareness alone is likely not enough — use of challenges, comparisons/ competition, and inspiring messages, et cetera, is important; and, that these additional factors become especially significant as they move away from early adopters (they will need to engage with the range of potential motivations to reduce water use — conservation, cost savings, competitiveness with others, et cetera).

Future Program Design

This report discusses design questions raised by the first round of challenges in the **Civic Accelerator** (CA). The primary purpose of the evaluation and this report is to support future challenges run through the Accelerator or programs like it. This includes challenges in Guelph as well as other cities.

This report is designed to serve people already familiar with the Accelerator, specifically those looking to implement a version of the program and considering changes to the program's design.

This report is one of four that constitutes the evaluation of the Civic Accelerator. Other sections of the evaluation include:
- **Section A: Evaluation Summary**. An overview of all findings from the evaluation.
- **Section B: Program Summary**. A description of the program, including the logic and assumptions that underpin its design
- **Section C: Case Studies**. Detailed case studies of each of the two challenges from the first Civic Accelerator

Together, the two challenges from the first round of the Civic Accelerator provided a range of valuable insights for future versions of the program. Participants in the evaluation were asked to reflect on lessons learned and to suggest potential changes or improvements to the Civic Accelerator's design. Some common themes emerged from their suggestions.

The evaluation identified five types of recommendation:

1. **Expand the program's role in supporting implementation** — for example, provide funding for testing during the embed; include a "pilot" phase (after the embed) as part of the model

2. **Offer different pathways** — for example, adapt the length and goals of the embed according to the innovation readiness of the department and the maturity of the company

3. **Improve project management** — for example, clarify project management roles and responsibilities (department vs. company vs. Accelerator program); increase accountability processes, including a steering committee to support decision-making at key moments in the program; develop criteria for determining when and if problems can be combined into a single challenge (leak detection and water conversation; planning notices and engagement)

4. **Build capacity** — for example, provide mentorship to departments; offer additional mentorship to companies if needed; support and track learning (e.g., track iterations in the challenge brief)

5. **Refine the selection process** — for example, develop a rubric that allows early ideas to be scored on equal terms with market-ready solutions; more closely link the selection criteria to match the goals of the host department — specifically, how near or far from market should the solution be, and whether there is need and capacity to "co-create" a solution

To support program design, the table on the following pages lists key lessons learned and links them to one or more of the five recommendations. The lessons learned provide important context and rationale for any potential changes to the design of the Civic Accelerator.

LESSONS LEARNED	❶ IMPLEMENTATION	❷ PATHWAYS	❸ MANAGEMENT	❹ CAPACITY	❺ SELECTION
Achieving impact requires further support The water challenge produced a desirable and effective solution, but additional support for a program launch would have increased uptake of the meter.	✓				
Making a final purchasing decision requires more time and more testing and development The four month embed was only the beginning of the relationship in both challenges.	✓				
Departments can struggle to commit the staff time and funds required during the embed Planning staff were working "in their free time" and both challenges needed financial support from outside the department.	✓	✓	✓	✓	
Poor alignment between the department's goals and company's strengths leads to significant issues Milieu expected to be testing ideas with citizens, not implementing enterprise-wide solutions.		✓	✓		✓
The program cannot assume the departments and companies have the capacity for co-creation and iterative development of solutions A key driver of success in the water challenge was Alert and Water Services making decisions based on iterative testing of the product and the rebate program. There was some expectation of mentorship for the departments as well as the companies. This did not happen, but most evaluation participants felt it would be useful in building capacity to a) work with start-ups and b) use an iterative approach to decision-making when developing solutions.		✓		✓	✓
Some companies need (lots) of mentorship, others don't want or need any. Milieu wanted more mentorship than the two hours per month available to them. Alert already had access to mentorship and did not want any via the program.		✓		✓	

LESSONS LEARNED	① IMPLEMENTATION	② PATHWAYS	③ MANAGEMENT	④ CAPACITY	⑤ SELECTION
RECOMMENDATIONS					
Without support, departments will default to familiar "client-vendor" relationships (as opposed to "co-creation" relationships) Alert was primarily responsible for project management. Milieu was increasingly seen as an outside consultant — being set tasks by the City and expected to working on them independently.			✓	✓	
There are significant incentives and pressures for the department and company to continue working together, and it may be difficult for either to take "off-ramps" The Accelerator represented a significant opportunity and financial investment for the companies. Likewise, the time invested by the City departments, as well as other departmental priorities, created additional pressure to continue working with the solution partners.		✓	✓		
Challenge statements often contain more than one "problem" (leak detection and water conversation; planning notices and engagement), and sometimes challenges involve more than one department. (Planning and Clerks). Milieu focused most attention on engagement rather than planning notices. Alert focused primarily on water conservation rather than leak detection. It was unclear when problems should (and shouldn't) be combined in a challenge, and later how one problem was prioritized over the other(s).			✓	✓	
Participants need support to in order to assess what type of innovation they need, and they need specific guidance to evaluate a company's capacity to meet that need The Planning department wanted Milieu to adapt an existing product, whereas Milieu wanted to co-create new features. In general, the evaluation committees found it useful to have different perspectives and expertise (from outside the City). They also found the evaluation criteria favoured solutions that were closer to market.		✓			✓

Key Conclusions and Design Questions

The following pages summarize **three** key conclusions drawn from the first round of the Civic Accelerator. While the program shows significant promise, the experience and results across the two challenges were markedly different. Therefore, each conclusion also poses important questions for any future rounds of the Civic Accelerator.

CONCLUSION 1   There is a clear need for a program like the Civic Accelerator

Participants in the evaluation were unequivocal: municipalities do need to make purchases that seem poorly suited to traditional models of procurement. All of the City departments involved felt the Accelerator provided value that would not otherwise have been possible. They also felt, and in some cases could already identify, other purchases or challenges that would benefit from the Accelerator model. Some of the hallmarks of these kinds of purchases include the difficulty of writing specifications, the desire for renewed energy and fresh ideas from outside the corporation, but also a general sense of uncertainty about the challenge, about the best strategies to address it, and about the overall costs and benefits of any proposed solution.

The Solution Partners were equally clear about the potential positive impact partnerships of this nature could have for start-up businesses. Although Alert Labs has been able to capitalize on the opportunity and Milieu has not, the experience nonetheless provided significant benefits in both cases.

Key program design question:
What proportion of the purchases municipalities make
would actually benefit from this approach?

The answer to this question has implications for the Civic Accelerator model — should it continue to run as a specialist program, administered and with supports from a dedicated, centralised team? Or, should the Accelerator be integrated into existing procurement practices, and delivered via procurement departments, a simple variation in the existing toolbox of procurement options?

Estimates ranged from 10% to 30%, and one City staff person thought a cohort of challenges could be run at most every two years. Nonetheless, its clear the Civic Accelerator is relevant to a minority of purchases.

CONCLUSION 2 It is unclear whether either challenge has provided an archetype for how solutions are developed

Co-creation and iterative development are two features of the Civic Accelerator, but it is unclear if both are equally important. While the water challenge was a successful example of effective decision-making based on iterative testing of a solution, it began with a product that was already ready for market. The planning challenge, by contrast, aspired to co-create a solution from scratch, but failed to employ prototyping and iterative development.

Co-creation in this case describes the City and Solution Partner working closely together in developing a solution. While there is broad agreement that this does not mean merely implementing an otherwise finished product, it is unclear the degree to which a solution is being co-created from scratch. There is also the question of what constitutes the solution being developed — Alert and Water Services did make some improvements to the devices, but they also created a program together. Both are important to addressing the challenge.

Neither challenge resulted in 'co-creation' of solution from scratch, and both had more familiar client-vendor relationships. It also appears that, on reflection, neither department actually expected to co-create a solution from scratch — the Planning department expected to adapt an existing solution, and water services wanted a market-ready solution.

It is also worth noting that the idea of co-creation in the public sector has often been synonymous with "users" (often citizens) being closely involved in the development of products and services. This goes beyond the user-testing that was a feature of the Accelerator.

A key driver of success for the water challenge was the capacity of those involved to practice decision-making based on data derived from iterative testing of the products and program. In the planning challenge, by contrast, the inability to work in this way proved particularly problematic.

Key program design question:
Are both co-creation and iterative development core features
of how the Civic Accelerator develops solutions?

Ultimately, it remains to be decided whether the program should aim for an archetypal experience — excluding challenges and departments that don't fit the ideal, or whether a degree of flexibility would be useful. Could, for instance, the Accelerator provide value in situations where a solution has already been developed but where iterative testing is needed in order to generate data (and confidence) in its outcomes?

A framework for categorising challenges might prove useful. The Agile methodology — popular in software development — provides one example of a framework that might help "situation recognition." The method was suggested by evaluation participants, and might allow the Accelerator to manage expectations and adapt design of the embed portion of the program accordingly. The phases of Agile include:

- Discovery — associated with validating user-assumptions about needs, market research, and other forms of exploratory research
- Framing — associated with more clearly defined problem statements and goals, defined features (of a product, et cetera)
- Delivery — associated product development and early implementation
- Change management — associated with managing widespread and full implementation of the solution

Using this framework, Milieu understood the planning challenge to be more like discovery and framing, whereas the Planning department understood it to be more like delivery and change management. The Water challenge was more like delivery (and is now into change management), and was understood in that way by both the solution partner and the host department.

A framework like this may help shed further insight on the difficulties experienced with the planning challenge. On the one hand, Milieu may not have been mature enough for the program, reflecting a failure of the selection process. On the other hand, the planning challenge may have actually suffered from poor situation recognition, which led to a misalignment between the type of innovation needed and the type aspired to by the department and the solution partner.

CONCLUSION 3 Scaling solutions to other cities has been solely the responsibility of the companies

The possibility of generating additional sales to other municipalities is part of the value proposition for companies participating in the Accelerator. Supporting sales to other municipalities may help recruit companies for future challenges, but given the nature of these challenges, supporting the speedy adoption of successful solutions would also serve the public good more generally. However, it is unclear who would take responsibility for this. Departments already struggled to commit time and resources, and may feel their mandate does not extend to other municipalities.

Key program design question:
To what extent should the Accelerator attempt to support
the adoption of solutions in other municipalities?

While Alert Labs has had success working with other municipalities, to date, a piggy-back clause, which would make it easy for other cities to purchase solutions developed through the Civic Accelerator, remains an untested feature of the program. Co-operative purchasing groups and multi-city challenges would be other options. They may also have the added benefit of providing a way for municipalities to pool resources, making it easier to participate in a challenge.

The Municipal Innovation Exchange, a three-year project to expand the Civic Accelerator, will present an opportunity to test and refine the design of the Accelerator, and in particular to explore how the Accelerator can support the adoption of solutions in other municipalities.