

Section I: Applicant Information

Question 1:

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| Name of Community | City of Whitehorse |
| Province/Territory | Yukon |
| Population | 28,225 (2016 Census) |
| Indigenous Community (Y/N) | N |

N

Question 2:

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| Prize Category | \$10M |
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Section II: Preliminary Proposal

Question 3:

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| Challenge Statement (single sentence, 23/50 words, contains outcomes) | After experiencing increasingly unaffordable housing costs over the past decade, our community will become a national leader in developing solutions to housing affordability. |
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Question 4:

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| <p>Outcomes (specific goals, justifying level of ambition and achievability of outcome)</p> <p>Baseline data and evidence to establish the current state with respect to the metrics used in the Challenge Statement, and the context</p> <p>Evidence to support the selection of these outcomes over others</p> <p>Rationale for smart city approach</p> <p>Strategy for measuring progress</p> <p>(1169/2,500 words)</p> | <p>Outcomes:</p> <p>1) We will establish a Centre for Affordable Housing Innovation with a mandate to find innovative ways to improve housing affordability using both technical and Social Innovation methods. The Centre will:</p> <ol style="list-style-type: none"> a. Bring governments (First Nations, federal, territorial, and municipal), industry, academia, NGOs, and other interested parties together in partnership over a common objective (improve housing affordability), as well as specific objectives (to be determined by research and the partners); b. Compile, collect, analyze and share social, economic, and technical information regarding northern housing and northern housing affordability; c. Work to find technical innovations that: <ol style="list-style-type: none"> i. <i>Reduce the cost of home construction in the north to a point where a business case exists for the private sector to develop rental housing and where a household or homebuyer spends no more than 30% of their pre-tax income on shelter costs.</i> ii. <i>Reduce the cost of operating and maintaining homes in the north;</i> |
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- iii. *Reduce the cost of land development and lifecycle municipal infrastructure costs, and*
- d. Develop policy recommendations using a Social Innovation approach.

Current State:

According to CMHC's 2017 Northern Housing Report, Whitehorse has the fourth-highest average spending on shelter costs in Canada, spending, on average, \$20,157 – well above the Canadian average of \$17,509.

One in five Whitehorse residents cannot afford market housing. Housing price increases in the past decade far surpassed corresponding increases in real household incomes. Within a four-year period, the average price for real-estate transactions increased by 27% (from \$362,246 in 2014 to \$463,400 in Q4 2017).

There are a number of factors affecting housing affordability in Whitehorse:

- **A growing population.** According to the Yukon Government, the Territorial population grew for the 13th consecutive year in 2016. Population growth is being supported by positive net migration. Net migration levels increased in 2016, with 344 net new migrants moving to the Territory, the majority from international locations. While this may not seem like a lot of people, Whitehorse is a small city and its population growth is outpacing the national average by 2% (7.4% between 2011 and 2015). A growing population means increased demand on the existing housing supply. In October 2017, the rental vacancy rate was 2.8%, but for single individuals or families in need of more than two-bedrooms, the vacancy rate was less than 1%. Increased rental demand has put upward pressure on average rental prices in Whitehorse. The average two-bedroom rent increased from \$1,029 in October 2015 to \$1,083 in October 2016. CMHC expected the two-bedroom average rent to increase modestly in 2017, as new rental units, which tend to be more expensive than existing stock, lift the average. As a result, the average purpose built two-bedroom apartment rental rate was expected to rise to \$1,100 in October 2017.
- **Changing demographics.** There is a mismatch between the city's population demographics and the available

housing stock, with single-family dwellings being the predominant housing type despite substantial growth in single and two-person households. A rapidly-aging population has also led to gaps in the housing spectrum for seniors.

- **Rising land prices.** The City of Whitehorse is conscious of rising land prices and is looking for ways to boost neighbourhood development and increase housing supply. Very little land is owned by the private sector; the majority of land development needs to be undertaken by the Yukon Government as a public service, and the financial commitment is so great it is difficult to keep up with demand. During the last Government land lottery (March 2018), demand for residential lots was nearly double the supply.
- **Rising material costs, labour costs, and interest rates** are affecting the affordability of new home construction.
- **Inefficient homes.** Almost half (45%) of Yukon's dwellings were constructed in or prior to 1980. 36% of Yukon dwellings were built between 1991 and 2011. Much of the older stock is expensive to operate, maintain, and repair and were built to standards not suitable for northern climates.
- **Declining stock.** An estimated 20-30% of houses in Whitehorse are in core need for repairs or require demolition for health or structural reasons. This number might be much higher, but data is lacking. These demolitions or condemned homes further reduce the available housing supply.
- **Rising cost of living.** The cost of living continues to rise. In February 2018, Statistics Canada reported that the CPI for Whitehorse was 129.5, a 2% increase over the year previous. According to the CMHC, in Whitehorse, average spending on shelter-related costs (including mortgage interest, home heating, etc.) is the fourth highest in Canada.

Beyond housing prices, there are a wide range of organizations who play a role in housing and/or housing affordability, but these organizations are generally disconnected from each other. There is no convening body that brings these organizations together in partnership to work toward a common goal, or to become a platform for

innovative projects (innovation challenges, pilot projects, affordable housing incubators, technology testing, etc.).

Affordable housing solutions developed in southern Canada may not work in Northern Canada where climate, remoteness, and economic constraints pose greater challenges – but affordable housing solutions developed in the North can be game-changing for both the North and southern Canada.

Evidence:

- [Yukon Rent Survey](#), Oct 2017
- [Yukon Real Estate Survey](#), Q4 2017
- [CMHC Market Housing Information – Northern Housing Report](#), 2017
- [Ours to Build On, The Housing Action Plan for Yukon](#), 2015
- Public input on the Smart Cities Process

Rationale for a Smart City Approach:

The Yukon *Housing Action Plan* “recognizes that no one organization has the expertise or capacity to meet the housing challenge alone; the scale and complexity of housing issues requires a coordinated, collective effort.” It goes on to explain that “partnerships and collaboration between government bodies (includes government contracted agencies/ non-profit organizations) and the non-profit, private sectors are vital to combating the “silo effect”, and in some cases, the duplication of services. Improved collaboration speaks not only to groups operating in the same sector and/or service areas, but also the potential for innovative solutions across and between sectors.” This also includes businesses, academia, and others.

We need to innovate to address the challenge of housing affordability, particularly for vulnerable and/or marginalized populations. That means gathering and sharing better data, working together using collaborative processes, and developing and applying new technologies more-effectively.

Strategy for Measuring Progress:

The Yukon *Housing Action Plan* says “Organizations working throughout the continuum spoke to a general lack of data

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| | <p>and statistics upon which to base decision-making. The Yukon’s small population poses challenges to statistically-valid data collection... and lack of data can impede proactive planning for both government and non-government organizations.”</p> <p>Our project starts with improving the quality of data, analysis, and information-sharing. The project partners will, collaboratively, use this work to prioritize key performance indicators and appropriate methodologies to measure these performance indicators. Depending on the prioritized indicators chosen by the partners, measures could include:</p> <ul style="list-style-type: none"> • New construction methods that reduce construction material and labour costs by a defined percentage; • Energy efficiency or energy-management systems or designs (district or otherwise) that provide a pre-determined payback and reduce operating and maintenance expenses by a defined percentage; and/or • New approaches to land development that result in less-expensive municipal infrastructure, faster development times, and lower lot prices. <p>Every project or initiative undertaken by the Centre for Housing Affordability Innovation will require a performance measure and accompanying evaluation methodology.</p> |
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Question 5:

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| <p>Public Participation (501/1,500 words) now and going forward</p> | <p>From the beginning, Whitehorse’s submission to the Smart Cities Challenge has been guided by the public. We used the following process:</p> <ol style="list-style-type: none"> 1. Establishment of cross-organizational working group and Technical Advisory Group – A group with City, Yukon, and YuKonstruct was established to steward the development of the Smart Cities Challenge Process. A Technical Advisory Group was also established, comprising potential partners in the implementation of projects identified through the process, including: representatives from Kwanlin Dün First Nation and the Ta’an Kwäch’än Council, Yukon Government, the City of Whitehorse, utility and |
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telecommunication organizations, academia, and the technology sector.

2. **Public Challenge Identification** – Using social media, the www.smartwhitehorse.ca website, and a broad advertising campaign to spread awareness, we asked the public what they saw as the most pressing issue facing Whitehorse. We received 65 submissions, all of which fit within 16 themes. The themes were reviewed and approved by the Technical Advisory Group and the City of Whitehorse. Interestingly, all of the themes were already reflected in existing City of Whitehorse, territorial and federal strategies.
3. **Public Challenge Selection** – The 16 themes went to the public for four rounds of online voting where the “winning” priority was identified by the public using a sports pool-type approach. In the final round, the main priority received 55.9% of the vote. Voters were invited to submit their e-mail addresses to be notified about the further opportunities to engage in the process. The City of Whitehorse donated passes to the Canada Games Centre as prizes to help stimulate participation in the voting process. In the final round of voting, 221 votes were received.
4. **Public Idea Generation** – Once the main priority was identified, the public and identified stakeholders were invited to participate in a full-day “Hackathon” style event. The event was used to:
 - a. Identify questions, available data, and data gaps;
 - b. Explore housing affordability using a systems-thinking lens;
 - c. Establish new connections and strengthen existing networks in the field; and
 - d. Generate potential solutions to address the challenge

The Hackathon participants included affordable housing seekers and advocates, businesses, Yukon Housing Corporation representatives, and other professionals in the field.

In addition to the Hackathon, the broader public was asked to submit their ideas through the smartwhitehorse.ca website.

5. **Application Development Sessions** – Following the Public Hackathon and online idea generation period,

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| | <p>the Technical Advisory Group and cross-organizational working group met to further explore interventions to address the challenge of housing affordability and to explore the ideas generated by the public.</p> <p>To promote public participation in the Smart Cities process, the public was invited to participate through morning show radio interviews, social media advertising, targeted e-mails, brochures, and newspaper articles. Full trust was placed in the public to identify the Smart Cities priority, as well as preliminary solutions.</p> <p>Should the Whitehorse submission be a finalist, the team will continue to engage the public and develop partnerships, keeping with a message heard at the Hackathon event: “Nothing about us without us.” Indeed, the proposed activities are dependent on further developing relationships and partnerships to solve the challenge of housing affordability.</p> |
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Question 6:

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| <p>Preliminary Proposal and Activities/Projects (2000 words max)</p> <p>937</p> | <p>We recognize that housing affordability is a complex issue that has social, technical, economic, political, and other dimensions. There are also priorities, interests, and policies that work against the provision of more-affordable housing. We will address this complexity by bringing diverse stakeholders and partners together, creating a platform for dialogue and innovation.</p> <p>We will establish the Centre for Affordable Housing Innovation with a mandate to find innovative ways to improve housing affordability using both technical and Social Innovation methods. With the northern context in mind, the Centre will bring governments (First Nations, federal, territorial, and municipal), industry, academia, NGOs, and other interested parties together in partnership over a common objective (to improve housing affordability), as well as specific, measurable objectives (to be determined by research and the partners).</p> <p>The Centre for Affordable Housing Innovation will use a Research, Innovation, and Commercialization (or deployment) approach.</p> |
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Research will include compiling, collecting, analyzing, and sharing social, economic, and technical information regarding northern housing and northern housing affordability. The Research team/research partners may engage in innovative approaches to data collection such as a “Plenty-of-Homes” landlord/tenant matching app that can be used to better understand the rental market from a supply and demand perspective.

The research team/research partners will also do jurisdictional scans for best practices and technologies being used elsewhere. Those technologies may be tested using pilot projects, product, method, or system testing and evaluation.

Innovation under the Centre for Affordable Housing Innovation will work toward finding technical innovations that:

- 1) Reduce the cost of home construction in the north to a point where a business case exists for the private sector to develop rental housing and where a household or homebuyer spends no more than 30% of their pre-tax income on shelter costs.
- 2) Reduce the cost of operating and maintaining homes in the north;
- 3) Reduce the cost of land development and lifecycle municipal infrastructure costs

Technical solutions may be found using:

- Innovation challenges – cash prizes for solutions to specific, defined, measurable problems. Solutions could include:
 - New construction methods
 - Innovations in land development and municipal infrastructure
 - New technologies for retrofits
 - Home automation, etc.;
- Pilot projects – demonstrations of affordable housing innovations to test and prove effectiveness;
- Prototyping; and/or
- Technology adaptation – employing existing technologies and adapting them to a northern context; and/or

- Advanced manufacturing – the Centre may provide access to advanced manufacturing technologies, similar to a makerspace, for prototyping, testing, or commercialization.

Innovation will also include using Social Innovation approaches to overcoming affordable housing challenges, looking at social, political, economic, and other dimensions affecting affordability and finding innovative policies and practices that can help to achieve our objective. The Centre may develop policy recommendations using collaborative, multi-stakeholder approaches that address housing affordability issues at a systems level.

These activities will be completed through project partnerships. The permanent partners will identify priorities for innovation and will evaluate which projects are most-likely to help the partners achieve their objectives.

Commercialization will focus on deployment of the knowledge or technologies produced through the Centre.

This may include, but is not limited to:

- Publishing standards and best practices
- Open data
- Storytelling (video, social media, testimonials, conferences, etc.)
- Providing assistance with licensing/patents
- Product incubation (business counselling support, assistance with marketing, procurement, and other business expertise)
- Access to advanced manufacturing technologies

All of these activities will have clear, measurable links to the specific affordable housing priorities identified by the Centre for Affordable Housing Innovation partners. Every project must ultimately work toward improving housing affordability.

Leveraging Partnerships/Leveraging Federal, Territorial, and First Nations Priorities

Affordable housing is a priority for everyone. The Smart Cities Challenge prize will help us to establish the Centre for Affordable Housing Innovation and using that platform for collaboration and innovation, will help us to engage in

projects that can leverage resources, expertise, funding and investment from other stakeholders. While the scope of each project will vary based on need and anticipated outcomes, we will be able to leverage the \$10M prize to complete far more projects than we could with the \$10M alone.

Yukon Experience with Research, Innovation, and Commercialization

In the Yukon, we have experience with centres of excellence and innovation. As examples, we have seen successes through the Yukon Research Centre, Cold Climate Innovation, and the Centre for Northern Innovation in Mining. All of these organizations use a Research, Innovation, Commercialization approach.

The Yukon Research Centre provides support for research, innovation, and commercialization. In recent years it has, in partnership with the Department of Economic Development, hosted the Yukon Innovation Prize for businesses with innovations in: social entrepreneurship, housing, and health and wellness. The winner of the 2015 Yukon Innovation Prize developed a centralized control system for radon mitigation. More information on the Yukon Innovation Prize can be found here:

<https://www.yukoncollege.yk.ca/innovation/yukon-innovation-prize>

Cold Climate Innovation is focused on the development, commercialization and export of sustainable cold climate technologies and related solutions for subarctic regions around the world. CCI supports the partnership between applied scientific researchers, industry and government dedicated to addressing cold climate issues affecting northerners. CCI project areas include alternative energy, building construction, climate-related research, environmental remediation, food security and mechanical innovation. There are many CCI projects completed and underway. Information about those projects can be found here: <https://www.yukoncollege.yk.ca/innovation/projects>

The Centre for Northern Innovation in Mining has an applied research unit that creates a direct link between researchers and industry, facilitating projects and development related to

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| | <p>mining, sustainability, and mine technology, adaptation, and innovation. More information about CNIM and their projects can be found here: https://www.yukoncollege.yk.ca/programs/centres-institutes/centre-for-northern-innovation-in-mining/research</p> <p>By applying similar, proven, approaches to housing, we believe that we can become a national leader in improving housing affordability.</p> |
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Question 7:

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| <p>Community’s Medium and Long-Term Goals, Strategies and Plans (500 words max.)</p> <p>Note: can upload PDFs as well</p> <p>352</p> | <ol style="list-style-type: none"> 1) Our project is of national importance. According to the <i>National Housing Strategy – A Place to Call Home</i> (www.placetocallhome.ca), 1.7 million families still don’t have a home that meets their basic needs. The strategy recognizes “housing challenges in Canada’s North are also very different than in the rest of the country. Harsh climates, remote locations and higher costs make homes in northern communities more expensive to build, operate and maintain.” If we can address affordable housing issues here, then our successes can be applied anywhere in Canada. 2) The Yukon Housing Corporation’s <i>Ours to Build On: Housing Action Plan</i> (http://www.housingactionplan.ca/) recognizes that “housing in Yukon – including the services that help people gain and maintain housing - is delivered through a highly interconnected system of government, non-government, and private sector entities. The resulting picture can appear complex, and with limited time and resources, organizations may struggle to connect beyond their specific program, mandate, or client group, instead operating in silos. The Housing Action Plan for Yukon is a concerted effort to break down those silos and tap into the expertise and passion residing throughout the housing delivery system in Yukon. It draws on collaboration and inclusion as its key strengths. The Plan recognizes that no one organization has the expertise or capacity to meet the housing challenge alone; the scale and complexity of housing issues requires a coordinated, collective effort. Our proposal is to create and resource the platform that makes this happen. 3) The City of Whitehorse’s <i>Strategic Plan Update 2017</i> (http://www.whitehorse.ca/home/showdocument?id=8350) |
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| | <p>identifies four priorities. The top two are planning for growth and affordable housing. The Strategic Plan recognizes that “Housing is more than shelter; it provides stability, security, and dignity. By working with our government and community partners we are striving to build a strong and inclusive city. This priority supports the provision of adequate and affordable housing to all citizens of Whitehorse through land development, legislative and regulation support, and advocacy.”</p> <p>Our challenge statement is in alignment with the goals, strategies and plans of numerous other organizations in the city, territory, and across the North. Unaffordable housing affects us all.</p> |
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Question 8:

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| <p>Community’s Readiness and Ability to Successfully Implement the Proposal (1,000 words max)</p> <p>563</p> | <p><i>City of Whitehorse experience</i></p> <p>Staff at the City of Whitehorse has extensive experience in undertaking complex, multi-stakeholder initiatives.</p> <ul style="list-style-type: none"> • We have worked to build strong relationships with the three other Whitehorse-based Governments. • We have a strong structure already in place to tackle housing issues: the Housing Action Plan for Yukon, a recent (2015) plan that brought together dozens of housing-related agencies to create a practical, implementable plan. The City of Whitehorse was a key contributor and remains engaged as part of the Implementation Committee, which include government and private sector representatives. Committee members meet monthly to oversee Plan implementation and to share information, knowledge and expertise on the housing sector. • We follow International Association for Public Participation (IAP2) principles when designing/conducting public engagement. • We are working on a Public Engagement Strategy that will be complete later in 2018. The strategy will be designed to improve how the City as a whole organization does engagement with the public. The most recent phase was called “Talking Together” and was done as a shared project with Yukon Government. Project website: |
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www.talkingtogetheryukon.ca.

- We standardly create plans that list action items that consider budget, timeframe, partners, and other considerations. We increasingly take a very practical approach to implementation, focused on results.

Two examples of relevant initiatives are:

1. Vulnerable People at Risk Initiative (2015)

www.whitehorse.ca/departments/economic-development/vulnerable-people-at-risk-initiative

The City of Whitehorse and Kwanlin Dün First Nation (KDFN) share a vision to improve the lives of vulnerable people in our city. In 2015, we invited other governments, businesses, organizations, and the public to come together with us to share ideas and insights on how to better support people at risk and find solutions to end homelessness.

- The City worked together with KDFN to hold this high-profile event to have a conversation about vulnerable people
- Held a forum (nearly 300 members of public attended)
- Held a business roundtable (57 attendees)
- Led towards creation of Safe at Home Action Plan (2017), a multi-organizational plan with goal of eradicating homelessness.

2. Downtown Plan (upcoming, 2018)

www.whitehorse.ca/downtown

Started in spring 2017, this update to the City's Downtown Plan will be complete summer 2018. The comprehensive process was designed to consider all past work and do community-wide engagement. Despite being a complex project, the intended result will be a simple "top 10" action list of the key priorities for improving our Downtown.

Additional highlights of engagement include:

- During the course of engagement, thousands of people shared their ideas and thoughts for Downtown via interviews, workshops, online surveys, interactive installations, pop-up events, walking tours, a community bbq, and social media.
- Governments and groups that were involved during

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| | <p>the planning process included Kwanlin Dün First Nation (KDFN) and Ta’an Kwäch’än Council (TKC) representatives, Government of Yukon departments (YG), Downtown businesses, community organizations, and Downtown and Whitehorse residents.</p> <p>In terms of potential weaknesses, one to consider might be the upcoming municipal election in fall 2018. Political change may occur. Affordable housing is a current council priority; this may cease to be the case. This seems unlikely though, given the strong public process for this initiative that demonstrated it as the public’s top priority.</p> <p><i>Other organizations with relevant experience</i></p> <p>As mentioned above, we are fortunate to have several centres of excellence and innovation available to collaborate with and learn from. Three examples noted in question 6 are the Yukon Research Centre, Cold Climate Innovation, and the Centre for Northern Innovation in Mining. All three represent a similar approach to the proposed Centre for Affordable Housing. Their experience in starting up and running their organizations will be available to us.</p> |
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Question 9:

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| <p>Plan for using the \$250,000 Grant (500 words max)</p> <p>393</p> | <p>Project management: \$60,000 Formalize Centre for Housing Affordability Innovation partnerships: \$25,000 Data aggregation, collection, analysis and sharing: \$100,000 Project prioritization and development: \$45,000 Community engagement and communications: \$20,000</p> <p>Rationale:</p> <ul style="list-style-type: none"> • <i>Project management</i> – A project manager will be hired/contracted to assist with management and administration of the partnership-development, information gathering, and prioritization processes. This position will also assist with planning, budgeting, and developing the detailed proposal for the Smart Cities Challenge. • <i>Formalize Centre for Housing Affordability Innovation</i> |
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partnerships – Partnerships will be cultivated and partnership agreements will be developed with permanent and project partners. The agreements will outline what each partner brings to the organization, linking it to the objectives of the organization (improving housing affordability).

- *Data aggregation, collection, analysis, and sharing* – Housing data - particularly for the North - is scattered, often of poor quality (due to a range of organizations working in housing, collection techniques, data suppression, etc.), limited in scope, and generally hard to find if it is collected at all. A concerted effort on improving the quality and availability of data, as well as informed analysis will improve the partners' ability to prioritize and make decisions on housing affordability can be improved in the North. This may include scans for research and best practices from other jurisdictions across the circumpolar north.
- *Project prioritization and development* – The Centre for Housing Affordability Innovation partners will convene over a multi-day facilitated session to:
 - Review the findings from the data analysis stage;
 - Develop performance targets related to housing affordability (e.g.: % reductions in construction costs for new homes, % reductions in shelter operations and maintenance for new and existing homes), and
 - Prioritize projects and approaches for the Centre. This may include innovation challenges, pilot projects, product or method testing, demonstration projects, or other techniques that will improve housing affordability.

Following the prioritization session, identified projects will be developed so they can be “implementation-ready”. This work will also be used to develop the detailed project proposal for the Smart Cities Challenge.

- *Community engagement and communications* – To raise awareness of the initiative and to cultivate partnerships, locally, nationally, and internationally, we will develop and implement a communications plan.

Community/stakeholder participation will continue to be

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| | <p>encouraged at all stages of the process, with a particular emphasis on involving residents in need of more-affordable housing and those who are unable to afford market housing.</p> |
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Question 10:

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| <p>Partners (500 words max)</p> <p>500</p> | <p>We established a stewardship group to oversee the Smart Cities process and a Technical Advisory Group to assist with technical aspects of the process and to provide input. The members included the City of Whitehorse and the following partners:</p> <ul style="list-style-type: none"> • <i>Kwanlin Dün First Nation</i> – A self-governing First Nation whose Traditional Territory includes and surrounds Whitehorse. Has had a constitutionally protected Land and Self-Government Agreement since 2005. • <i>Ta’an Kwäch’än Council</i> – A self-governing First Nation whose Traditional Territory includes and surrounds Whitehorse. Has had a constitutionally protected Land and Self-Government Agreement since 2002. • <i>Yukon Government, Department of Economic Development</i> – Offers programs and funds for business, industry and communities to help develop and maintain a sustainable and competitive economy. • <i>YuKconstruct Makerspace Society</i> – Community-operated makerspace that provides space, tools, and expertise to entrepreneurs, inventors, and innovators, and operates a co-working space for knowledge sector entrepreneurs. • <i>NorthwesTel</i> – Telecommunications service provider for Northern Canada. • <i>Yukon Energy Corporation</i> – Public utility. • <i>TechYukon</i> – Industry association for technology-driven companies with a mission to grow the technology industry in the Yukon. • <i>Yukon College (becoming Yukon University)/Yukon Research Centre</i> – Investigates northern questions by applying science and traditional knowledge to offer innovative, northern solutions. • <i>Cold Climate Innovation</i> – Supports partnerships |
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between applied scientific researchers, industry and government dedicated to addressing cold climate issues.

We believe that complex problems require cross-organizational collaboration, but that some form of institutionalization and resourcing is required to foster cohesion and activity. Our proposed partnership approach requires two types of partners:

- 1) **Permanent Partners** – Ongoing partners
- 2) **Project Partners** – Partners for specific projects undertaken by the Centre for Affordable Housing Innovation (pilot projects, testing and analysis, design, etc.) The Centre will host innovation challenges which will help to identify new and potential partners.

Partnerships will be formalized through the use of partnership agreements. Using the Finalist Grant, we will bring the potential partners together to develop and refine the agreements. Potential Partners include:

- **City of Whitehorse** – Responsible for zoning, bylaws, municipal planning, building inspection and permitting.
- **Yukon First Nations** – The Yukon has 14 First Nations, 11 of which are self-governing (including housing).
- **Yukon Housing Corporation** – created in 1972 to address the quality and availability of affordable housing throughout the Yukon.
- **Non-for-profit housing service providers** - such as Grey Mountain Housing Society and Habitat for Humanity Yukon.
- **Yukon Government, Energy Solutions Centre** – provides technical information and financial incentives to encourage the use of energy efficient appliances and heating systems, conducts research on opportunities for energy efficiency and renewable energy, provides training courses, and participates in outreach to build capacity & awareness.
- **Businesses and Industry** –architects, contractors, suppliers, technology experts.
- **Yukon College**
- **Yukon Research Centre**
- **Cold Climate Innovation**

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| | <ul style="list-style-type: none"> • Government agencies such as the Yukon Government Department of Economic Development and the Canada Mortgage and Housing Corporation. <p>The Centre for Affordable Housing Innovation will also seek partners beyond the Yukon, reaching out to:</p> <ul style="list-style-type: none"> • Northwest Territories Housing Corporation • Nunavut Housing Corporation • Cold Climate Housing Research Centre (Fairbanks, Alaska), (https://www.youtube.com/watch?v=1N1JGGfti0A) • Other northern First Nations, Inuit Communities, and municipalities • Other academic and research institutions, nationally and internationally |
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Question 11:

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| Confidential Third-Party Information (if any, 500 words max) | N/A |
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Section III: Other Requirements

Question 12

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| <p>Summary of Preliminary Proposal (include image, 200 Words max) (get translated into French)</p> <p>191</p> | <p>Whitehorse has the fourth-highest average spending on shelter costs in Canada. One in five residents cannot afford market housing. With a population growth outpacing the national 5-year average by 2%, demand for building lots at double the supply, a very low rental vacancy rate, home prices and rental costs continue to escalate beyond the realm of affordability for many people. It is no surprise, then, that residents identified housing affordability as the community's most-pressing issue.</p> <p>We will improve housing affordability in Whitehorse using a combination of technical and social innovation. By bringing together diverse partners to create the Centre for Affordable Housing Innovation, we will pool our resources and collective wisdom to find ways to bring housing construction costs down to the point where it becomes economic to develop housing for rental purposes. We will also find innovative ways to bring operation and maintenance costs down so more of our residents can afford market housing. In doing so, we will be able to show other communities across the</p> |
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| | country and around the world how they, too, can address housing affordability issues. We want to become the national leader in developing affordable housing solutions. |
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Question 13

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| Online link to full version of the application | (link here) |
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Question 14

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| Evidence of Commitment (Letter of Support or council resolution) | Must demonstrate commitment of leadership to the outcomes in the Challenge Statement and to following through with the proposal. Should outline community suitability as a candidate, readiness to be in the national and international spotlight as a smart city, commitment from the organization to provide the necessary political and logistical support, alignment with the local focus and vision, reference to council resolutions, etc. |
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Question 15: Point of Contact

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| Name: | Mélodie Simard |
| Title and affiliation: | Manager, Planning and Sustainability Services, City of Whitehorse |
| Phone number: | (867) 334-2111 |
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Question 16

| | |
|--|--|
| Read the Privacy Notification, Consent and Release form, and Communication Protocol, and indication of agreement (Y/N) | |
|--|--|

Section IV: Survey Questions

Question 17 (if definitive data is not available, encouraged to provide estimated figures)

| | |
|--|---|
| 2017 FTEs (total): | 400 |
| % of total FTEs devoted to innovation: | 50% (Management, Sustainability, B&TS, Planning, Engineering, Ec Dev, Community Development etc.) |
| 2017 Total Operating Budget | \$73M |
| 2017 % of Total Operating Budget Devoted to Innovation | 10% |
| 2017 Total Capital Budget | \$47M |
| 2017 % of Total Capital | 50% (largely due to the development of a new City |

| | |
|--|---|
| Budget Devoted to Innovation (not assessed) | Operations and Management Building which is using innovative design and construction methods. |
|--|---|

Question 18 (pick up to two)

| | |
|-------------------------------|---|
| Economic Opportunity | X |
| Empowerment and Inclusion | X |
| Environmental Quality | |
| Healthy Living and Recreation | |
| Mobility | |
| Safety and Security | |

Question 19: Community system/services areas implicated in the preliminary proposal

| | |
|------------------------------------|--|
| Arts and Culture | |
| Economic Development | X |
| Education and Training | X |
| Emergency Services and Enforcement | |
| Environment | X |
| Land Use Planning and Development | X |
| Public Health | X |
| Recreation and Parks | |
| Roads and Transportation | X |
| Social Services | X |
| Waste | X |
| Water and Wastewater | X |
| Other (specify) | Building inspection/permitting Sustainability |

Question 20: Technologies Expected to be Implicated in the Preliminary Proposal

- Machine Learning/AI
- Augmented Reality (AR)
- FinTech
- Advanced Manufacturing
- Sensors
- Big Data Analytics
- Internet of Things (IoT)
- Cloud Computing

Mobile Applications