

SMART CITIES CHALLENGE APPLICATION

City of Charlottetown

Submitted: April 23, 2018

SECTION I: APPLICANT INFORMATION

Question 1:

Please provide the following information on your community.

Name of Community: Charlottetown

Province: Prince Edward Island

Population: 36,094 (Census 2016)

Indigenous Community: No

Applicant: City of Charlottetown (municipal government)

Question 2:

Please select a prize category:

\$50 million – for communities of all sizes

\$10 million – for communities under 500,000 residents

\$5 million - for communities under 30,000 residents

SECTION II: PRELIMINARY PROPOSAL

SUB- SECTION I: PROBLEM DEFINITION

TOTAL OF 55/100

Question 3:

Please define your Challenge Statement in a single sentence that guides your preliminary proposal. It should describe the outcome (or outcomes) you hope to achieve. (50 words max)

Charlottetown will become a community focused on building mental wellness and resilience among youth, reducing the prevalence of mood and anxiety disorders, reducing the costs of mental health care and reducing tobacco use, heavy drinking and cannabis use through increasing physical activity and improving opportunities for social inclusion and empowerment.

Question 4:

Please describe the outcome (or outcomes) your proposal seeks to achieve by elaborating on your Challenge Statement (2,500 words max)

- 1. Specific goals you hope to achieve by implementing your proposal, justifying both the level of ambition and the achievability of the outcome (or outcomes) sought.*
- 2. Baseline data and evidence to establish the current state with respect to the metrics used in your Challenge Statement, and context around the outcome (or outcomes) sought.*
- 3. Evidence to support the selection of this/these outcome (or outcomes) over others, in reference to the needs of the community.*
- 4. Rationale for applying a smart city approach to achieving the identified outcome (or outcomes).*
- 5. Strategy for measuring progress toward outcome (or outcomes) and achievement of outcome (or outcomes).*

40/100 for questions 3 and 4

Project Goals:

Goal Description: Combine data from multiple sources to provide a comprehensive picture of youth mental health and set up new data collection methods that will improve baseline data and can be used to measure progress to clearly defined outcomes.

Actions to support goal: create a cross-sector working group and enlist support of research design experts to develop evaluation schemes and pull together data from health care, schools and other sources in order to develop a comprehensive data collection platform with dashboards that can help all service providers make connections between data and their program design. The platform must be secure and meet the security and ethics needs of all contributors.

Justification for level of ambition: A lot of data is already being collected but it is owned by different departments and agencies. By creating a platform that combines different sources of data on related components of youth health and wellbeing, there will be a big picture of youth wellness needs. The evaluation scheme will ensure that all partner agencies have the tools to turn data into programs that create results and outcomes.

Achievability: Smart Cities technology includes many big data processing services. Cyber security is continuously improving and will be included in the project.

Goal Description: Develop tools for youth to self-evaluate mental health, recognize triggers for anxiety and identify ways to build mental health resiliency in the face of those challenges.

Actions to support goal: Development of smart phone applications that can be used to “check-in” with users on their mental wellness and allow them to track their levels of mental resiliency based on daily activities. The app would also make recommendations for local programs and services that could contribute to their mental resiliency.

Justification for level of ambition: Checking in and having a daily reminder to take care of their mental health provides youth with a reminder that our state of mental health is always evolving and can be managed and improved through a wide range of ways.

Achievability: Engaging youth in the design of this application will contribute to user uptake. IT firms will be provided with this challenge and seek to address it through smart cities technologies.

Goal Description: Use technology to connect youth with each other and with promotion and prevention services/programs in safe and supportive ways.

Actions to support goal: Development of tools to connect youth to each other and encourage face-to-face interaction with peers as well as the development of tools to easily connect youth to services and programs that can support mental health resiliency.

Justification for level of ambition: Cyber bullying continues to be a major challenge for youth. Social media and other technology use have, in some cases, contributed to anxiety and other mental health issues for users. An innovative approach could find new tools that would appeal to youth but also create an incentive for them to seek more face-to-face interactions. Programs for youth are not always communicated through the channels that youth use and so they may miss opportunities for accessing services and programs.

Achievability: Engaging youth in the design of the tools will contribute to user uptake. IT firms will be provided with this challenge and seek to address it through smart cities technologies.

Goal Description: Align recreational and educational programming to address the needs of youth and to build mentally resilient kids and improve access for all.

Actions to support goal: Provide training for all program-delivery agencies that seek to raise awareness of the value of coaching and instruction in shaping and contributing to youth mental health. Provide training for parents in understanding their role in shaping their child's youth mental health. Use public transit and other ride-sharing technologies to improve access to programming for all. Continue to keep programming low-cost or free. Consult with youth on the types of programming that they would be most interested in participating and partner with schools, community centres and other community spaces to increase programming that empowers youth and contributes to their mental health.

Justification for level of ambition: Extensive recreational programming is already offered in the City of Charlottetown through the Parks & Recreation Department, through partner agencies and through community groups. Training in youth mental health resiliency and aligning program curriculums is an extensive task but could make a big difference in Charlottetown's youth. Ensuring kids have access to programming will require addressing issues in access to transportation and cost barriers.

Achievability: Engaging partner agencies and supporting training and development needs to these ends will require building substantial buy-in, however, with a common goal of investing in youth it is anticipated that agencies will want to participate.

Goal Description: Reduce stigma around mental health issues and raise awareness of the fact that everyone has a state of mental health. Increase the comfort and commonness of mental health conversations.

Actions to support goal: Use public consultation sessions, speakers series, youth-led design and workshops (full detail in Question 6) to begin a bigger conversations about mental health and youth mental health specifically. Seek to address mental health awareness and knowledge

throughout the Charlottetown community. Use the youth mental health project to spread the discussion about mental health at the individual, peer, family, school and community levels.

Justification for level of ambition: Youth mental health cannot be addressed solely at the individual level. While this project focused on youth, it will be used as a platform to create connections between the mental health of youth and their surrounding environment which will contribute to a greater understanding of the big picture of mental health and how everyone faces mental health challenges.

Achievability: Mental health is an issue that is coming up more and more in the community of Charlottetown and it is anticipated that there is a readiness among residents and community agencies to really push the discussion and the solutions used to address it to the next level.

Baseline Data:

Data Set: Proportion of youth ages 12 to 18 who have mood and anxiety disorders

Data source: Canadian Community Health Survey 2015-2016

The following information was provided by the Chief Public Health Office of PEI:

Note: Respondents were asked to consider only those conditions which are expected to last, or have already lasted, 6 months or more and that have been diagnosed by a health professional.

a. Mood disorder

The proportion of PEI youth ages 12 to 18 years with mood disorders (including depression, bipolar disorder, mania, and dysthymia) was 3.1%^D (95% confidence interval: 1.6 – 6.0%).

b. Anxiety disorder

The proportion of PEI youth ages 12 to 18 years with anxiety disorders (including phobias, obsessive-compulsive disorders, and panic disorders) was 4.1%^D (95% confidence interval: 2.2 – 7.6%).

^D The estimate should be interpreted with caution due to high sampling variability.

Associated outcome: This project seeks to reduce the incidence of mood disorders and anxiety disorders among youth ages 12-18 years and to reduce the risk for all youth for mood and anxiety disorder.

Justification for selecting outcome for the needs of the community: Mood and anxiety disorders in early ages can be a significant indicator of mental health illness in later life. By focusing on building resilience to preventable mental health issues at an early age, it will contribute to a healthy adult population in the future.

Data Set: Health care costs associated with health service use for mental illness among PEI youth ages 0 to 18 years, 2014/15

Data source: PEI Discharge Abstract Database, PEI Physician Billing Claims and PEI Medicare Eligibility Registry.

The following information was provided by the Chief Public Health Office of PEI: For fiscal year 2014/15, the health care costs associated with health service use (meaning hospitalizations and physician visits) for mental illness was estimated at \$2,509,467.

Note: This cost corresponds to the analyses presented on page 38 of the Chief Public Health Office's Children's Report, 2017.

Associated outcome: This project seeks to address the high costs associated with hospitalizations and physician visits for youth ages 0-18 for mental illness. By investing in promotion and prevention on mental health wellness it is anticipated that PEI would see a reduction in clinical health care costs over time.

Justification for selecting outcome for the needs of the community: Health care costs and service delivery are significant and are a burden on tax payers and provincial and federal governments. Any initiative that supports reduction in health care costs is of benefit to the community economically.

Data Set: Percentage of youth meeting Canada's Physical Activity Guidelines of at least 60 minutes per day

Data Source: Health Behaviour of School-Aged Children (HBSC) survey

Excerpt from Children's Report 2017: When asked about the frequency and duration of moderate to hard physical activity in a typical week, only 19.8% of students in grades 6-10 reported meeting Canada's Physical Activity Guidelines of at least 60 minutes per day. Rates of self-reported physical activity decreased as grade level increased. Students with high family affluence are more likely to meet physical activity guidelines compared to the overall population of Grade 6 to 10 students in PEI. (p.22)

Associated outcome: This project seeks to address physical activity as a contributor to overall youth wellness particularly ensuring that physical activity does not decrease as grade level increases and ensuring equitable access to programming to support meeting physical guidelines regardless of family affluence.

Justification for selecting outcome for the needs of the community: Physical activity improves the overall health of children and physical health can contribute to positive mental health and resiliency. A healthy population requires looking at both physical and mental aspects and can provide excellent community benefits including decreased health costs for preventable diseases.

Data Set: Percentage of youth that smoke tobacco; engage in binge and heavy drinking and cannabis use

Date Source: Canadian Student Tobacco, Alcohol and Drug Survey (CSTADS)

Excerpt from Children's Report 2017: In 2014, 10.1% of students in Grades 9 to 12 reported being a current smoker. The prevalence of smoking in this population has only seen a slight decreased since 2008, when 11.9% of students reported being a smoker (p.26)

Excerpt from Children's Report 2017: In 2014, 42.8% of students in Grades 9 to 12 reported binge drinking at least once in the last 12 months and 26.3% reported binge drinking once a month or more.(p.28).

Excerpt from Children's Report 2017: In 2014, 33.1% of students in Grades 9 to 12 reported using cannabis at least once in the last 12 months and 12.7% reported using cannabis once a week or more (p. 30).

Associated outcome: This project seeks to address the mental resiliency of youth. It will examine the potential of decreasing health affecting behaviours, such as tobacco use, binge drinking and cannabis use through its components.

Justification for selecting outcome for the needs of the community: Iceland was able to significantly reduce rates of tobacco, heavy drinking and cannabis use in their youth population through their Youth in Iceland project that focused on providing programming for youth and building more robust community and family support systems for youth. This project seeks to take a similar approach in order to improve quality of life, health and wellness for youth and to invest in future populations for the prosperity of the City.

Rationale for Applying a Smart City Approach:

The City of Charlottetown wishes to be a leader in the area of youth mental health wellness and resiliency. Technological advancements have resulted in previously unimaginable levels of information sharing and communications. The advent of social media has resulted in a greater awareness of all societal issues. People are aware of and interested in advocating for greater wellbeing. Twitter and Facebook are platforms used to express opinions, share ideas and start movements. Societal wellbeing has improved as a result of this sharing of information. There are also examples of challenges such as bullying through social media that need to be addressed. The rationale for including a Smart Cities approach to youth mental health resiliency is youth's connection to technology. They have only known a technologically interconnected society. Recognizing this connection and building on the positive aspects and addressing challenges is key to youth mental health resiliency.

Smart technology as a diagnostic tool, real time data collection and information gathering are all aspects to be leveraged to improve youth mental health resiliency and verify improvements. Data collection aspects such as attendance levels at prevention related activities such as sports and social groups, visits to treatment related facilities and the use of online tools will be tracked.

While the term Smart City is typically associated with technology we'd also look to present the intelligence in developing youth mental health resiliency. The benefits of developing resiliency in youth will flow through society with time. It is also anticipated that targeting funding for preventative measures will be more than offset by reductions in treatment costs.

Strategy for Measuring Progress:

Research Design: As it is anticipated that data collection and analysis will be a large component of the project and as the City is committed to delivering a project that is evidence-based, the proposal will require research expertise to guide the project design and develop a strategy for measuring progress

towards the goals. The City is fortunate to have several excellent academic assets in the community including the Young Lives Research Lab, which is located at UPEI in Charlottetown and is led by Dr. Kate Tilleczek, Tier 1 Canada Research Chair in Children and Youth in Global and Local Contexts. This lab is funded by the Social Science and Humanities Research Council, a Canadian federal research-funding agency. The Young Lives Research Lab (YLRL) has already committed to support this project in the next phase for the research design and ethics approval and will also connect the City and this project to a wide network of social science and humanities professionals and researchers. In addition to YLRL, the City has already connected with the Chief Public Health Office which recently released PEI Children's Report 2017 which provides an established baseline of key indicators of child health and well-being in PEI. Dr. Shamara Baidoo-Boonso, Provincial Epidemiologist with the Chief Public Health Office has already expressed interest in supporting this project in the next phase through contributing to data collection models, as well as supporting the design of evidence-based public health promotion initiatives focused on youth mental health. The UPEI Applied Science Department has also committed their support to developing the framework for identifying key outcomes and ensuring that the project is set up to measure the appropriate indicators to track progress over time.

Outcome: Research partnerships will ensure that the project includes scientifically-approved data collection methods; that proposed initiatives are evidence-based and connect the project work to other researchers in the field on a national and international level.

Scope/Size: UPEI Young Lives Research Lab, the Chief Public Health Office, the UPEI Applied Science Department will assist in developing a strategy for measuring progress towards the goals listed above.

Question 5:

Please describe how your community residents have shaped your Challenge Statement. Describe your plans for continuing to engage and involve them in your final proposal going forward. (1,500 words max)

- 1. Descriptions of previous engagement with residents, businesses, organizations, and other stakeholders on topics related to the Challenge Statement.*
- 2. Descriptions of feedback that came to light through past engagement processes.*
- 3. Links between the Challenge Statement and engagement feedback.*
- 4. Evidence of efforts made to be inclusive and to represent the community's diversity.*
- 5. Plans to sustain engagement through the development and implementation of the final proposal.*

15/100

Engagement to Date:

Prior Engagement: *Integrated Community Sustainability Plan 2017* – The City’s first ICSP was adopted by City Council in 2010 and the latest version, developed through extensive public consultation, was adopted in March 2017. Consultation sessions focused on sustainability as a form of community resiliency and feedback was sought on how improvements to sustainability could be realized at the individual and community level. The importance of connection with each other, with the natural environment and with a purpose to make the community better were key insights for the City and with participants.

Prior Engagement: *Your City, Your Vision - Youth Retention Report* -The City’s Youth Retention Advisory Board (Youth Matters Board) formed in 2015 and has delivered a number of successful initiatives to engaging youth in civic life and improving the community for youth. Their *Your City, Your Vision* report was the result of feedback received from over 700 survey participants between the ages of 16-30. The *Your City, Your Vision* Report was released in 2016 and includes 18 recommendations for how the City can improve for youth. Two of the report recommendations focus on youth mental health services and others refer to creating spaces for youth in the City for social interaction and creative endeavours (music, arts, crafts, etc.).

Description: Preliminary Discussions with Federation of PEI Municipalities and Neighbouring Municipalities - The City’s Sustainability Officer participated in several discussions with neighbouring PEI municipalities on the Smart Cities Challenge. These discussions were hosted by the UPEI School of Sustainable Design Engineering (SSDE) and the Federation of PEI Municipalities (FPEIM). The group discussed a number of opportunities for focus areas including water quality, energy efficiency, renewable energy and transportation.

Feedback: The topic that repeatedly came up in these discussions was health (child obesity, inactivity, mental health, cancers and preventable diseases). While PEI’s Health Care system is managed at the provincial government level, all parties agreed that community health has a direct impact on municipal government and that municipalities are well-positioned to focus on health promotion and prevention.

Insight for Challenge Statement: Health is a challenge area and municipalities have a role in addressing health from a promotion and prevention side.

Description: Discussions with Senior Management and Council –Several project summaries were provided and reviewed.

Feedback: During the review and evaluation of options, the management team kept coming back to mental health. They recognized the impact that a project focused on mental health wellness and resiliency could have on the Charlottetown community and how it could create outcomes in areas like substance abuse, crime, loneliness and improved physical health.

Insight for Challenge Statement: Mental health wellness is a key determinant of a healthy community and the City of Charlottetown wants to provide leadership and support in this area.

Description: Discussions with UPEI and Queen Elizabeth Hospital Staff – City staff then met with the UPEI SSDE, the UPEI Applied Sciences Department and with their colleague from the Queen Elizabeth Hospital to discuss a mental-health focused application, the opportunities for using smart city technology and project design.

Feedback: QEH staff provided the example of the Iceland's Youth in Iceland project which is a project in Iceland that focused on working with their young people to decrease substance abuse through recreational programming. Iceland saw major reductions in substance abuse as a result of their project and created significant empowerment opportunities for youth. Feedback was also received on narrowing the focus to youth, rather than all citizens. It was argued that a focus on youth would address issues before they start and reduce the numbers of people requiring clinical support for mental health issues as they get older.

Insight for Challenge Statement: Focus on youth rather than the population as a whole as it will be more straightforward to create outcomes. The project can be expanded in the future to address other issues among other demographics.

Description: Discussions with Public Health – Next, City staff met with staff from the Chief Public Health Officer, Dr. David Sabapathay, Deputy Chief Public Health Officer and Dr. Shamara Baidooonso, Provincial Epidemiologist. They introduced staff to the 2017 Children's Report that provides data on child health and wellbeing on PEI. The report provides of excellent baseline data on child health and wellbeing on PEI; draws attention to social determinants of health (the interrelated societal conditions that influence peoples health; and provides insights into how risks for crime, youth violence, victimization and addictions are felt at the individual, family, peer, school and community/neighbourhood level.

Feedback: Feedback received from the Chief Public Health was substantial with the 2017 Children's Report shaping a lot of future discussions. Feedback was also provided in the area of financial investment – significant funds are needed to address issues in the clinical side of health care which leaves little for investment in public health promotion and prevention.

Insight for Challenge Statement: Focus on mental health prevention and promotion as there is not enough resources dedicated to this area and it could lead to significant cost-savings in the future. The data to support the project and to develop a baseline is available.

Description: Discussion with Canadian Mental Health Association – PEI Division – After this, City Staff met with the Executive Director of the PEI Division of CMHA. The ED provided information on the programs and services that they currently provide and the areas of demand where they are not able to keep up.

Feedback: CMHA is approached regularly for parents that are looking for support for their children that are facing mental health challenges. Unless it is an emergency situation they typically experience long wait times to see a counselor and there are not many other services offered during these wait times. The demand for support services for youth mental health issues

is ever increasing. Following with CMHA's national messaging around mental health week, the ED reiterated that we all have a state of mental health and that wellness and resiliency should be supported regardless of having a diagnosed mental health issue. While, social determinants of health are really important, CMHA sees youth that do not face any of these challenges (poverty, food insecurity, family instability, etc.) that still are suffering from mental health challenges.

Insight for Challenge Statement: Don't just focus on a specific demographic of youth (e.g. those with criminal backgrounds, those that are living in poverty) because all youth need support for mental health resiliency. Access to programming through the project should be open to all and create a level-playing field regardless of societal factors.

Description: Discussions with Youth Matters Board – City staff reached out the Youth Matters Board to get their insight on a project focus on youth mental health for the Smart Cities Challenge.

Feedback: While social media platforms can connect many people on larger scales they can also create mental health challenges in comparing oneself to others and feelings of having many digital friends but still feeling lonely.

Insight for Challenge Statement: It will be important to recognize this throughout the project design to ensure that technology is being used to make improvements in mental health resiliency and not exacerbate the issues.

Description: Discussion with Tech firms - City staff have contacted technology firms to gauge their level of interest and experience in developments that could be relate to youth mental health resiliency development.

Feedback: The experience base in Charlottetown includes the development of wearable technology used to monitor the wellbeing of military personnel diagnosed with PTSD. There are firms that are in the early stages of developing technologies to assist children with special needs or to improve mental health development.

Insight for Challenge Statement: The IT sector is strong in Charlottetown with related experience and a desire to make this project a success.

Description: Discussion with CBC local - On March 13, 2018 CBC PEI hosted a public forum on mental health on PEI. Follow up with the organizers and from the reporting provided insights to City staff on the public's perception of mental health issues and services on PEI.

Feedback: The feedback provided from this event is that there is a real lack of services in the mental health field and that there is an overwhelming need in the community. Feedback was also heard that it is very important to remove the stigma around mental health issues so that discussions around mental health become both more comfortable and more common.

Insight for Challenge Statement: The public is engaged on the issue of mental health and wants to see more investment and training in mental health. Costs for clinical mental health care could be substantially reduced through investments in mental health prevention and promotion.

Inclusive Focus for our Diverse Community: Charlottetown has quickly become a very diverse community. Large investments in immigration have led to a very culturally-diverse population. Openness and acceptance of differences is an important value of the City and is reflected in the City's ICSP Value Statements, (p.13 of ICSP).

Throughout the next phase of the project it will be essential to consult with a number of groups around youth mental health including the Mi'kmaq Confederacy of PEI, the PEI Native Council, PEI Association for Newcomers, Pride PEI, PEI Council for People with Disabilities and other relevant groups to ensure that all voices are heard.

Engagement Plans for Next Phases: Engagement in the next phase of the project will involve the development of a Cross-Sector Working Group; public consultation process with the public speaker series; youth-led design process with youth workshops; as well as meetings with agency groups listed above. The Cross-Sector Working Group will continue to oversee the project through the implementation phase and sub-groups will be formed from this overarching working group to facilitate broad engagement from stakeholders. Please see Question 6 for further details on public engagement process.

Question 6:

Please describe your preliminary proposal and its activities or projects. (2,000 words max)

- 1. Planned activities or projects to achieve the outcome (or outcomes) set out in the Challenge Statement.*
- 2. Clear links from the identified projects to the attainment of the outcome (or outcomes).*
- 3. Scope and size of each planned project in your preliminary proposal, describing how it is feasible and suitable for achieving the outcome (or outcomes) in a manner that is impactful for the community, ambitious, and transformative.*
- 4. Measures put in place to*
 - a. Make the proposal open, interoperable, scalable, and replicable or a description of your plan to do so going forward for the benefit of your own community and other communities in Canada*
 - b. Enable other uses of the technology, innovation, and data in your proposal*

15/100

Planned Activities:

Project Coordinator: If successful in receiving the \$250,000 grant, the City will hire a project coordinator to oversee the development of the final proposal and to set the stage for project implementation.

Competencies sought will include experience working in multi-stakeholder projects, with youth and/or in mental health; experience in IT, big data analytics, and/or smart technologies; experience in working with First Nations Communities; bilingual in both official languages and experience working for and/or with municipalities. The Project Coordinator tasks will be to work with the Sustainability Department and other City staff to prepare any required tender documents; develop and coordinate the cross-sectoral working group; coordinate research design with partners; design and deliver public consultation; coordinate youth-led design project with partners and write and submit the final proposal.

Outcome: By hiring the Project Coordinator, the City will ensure adequate staff capacity to move the project through each phase and to complete the final application.

Scope/Size: Length of term will be determined based on when the grants are announced and the deadline for the final application is set.

Feasibility: Project Coordinator position will be publicly advertised and shared through the City's vast networks of partners.

Commercial Sector Engagement: The City has already reached out to a number of private sector technology companies that have expressed interest in being involved in the City's Smart Cities strategy. A public request for proposals will be issued to engage the expertise of one or more technology companies to apply their expertise to the area of youth mental health. The City would expect to see proposals that address the areas of data collection and analysis; smartphone applications; digital communications; mental health opportunities of wearables and other sensor technologies. The City will frame the call for proposal in a way to attract both existing technologies and to advance new and emerging technologies. A Civic Accelerator program, offered in partnership with Charlottetown's Startup Zone will allow the City to also work with startup IT companies that want to work on smart technologies with the goal of improvement youth mental resilience. These emerging company partnerships will complement partnerships with established IT firms and build capacity in Charlottetown's IT business sector. All tenders and contract agreements will clearly specify that new technologies developed as a result of the project will be open source to ensure scalability and use by other jurisdictions.

Outcome: Commercial sector engagement will lead to the award of contracts to IT firms to develop concepts for technologies that will address challenges around youth mental health which will result innovative and scalable solutions. The Civic Accelerator program will build capacity among emerging IT companies in Charlottetown and potentially led to future employment in the IT sector.

Scope/Size: The number of contracts awarded will depend on the result of the public request for proposals. It is anticipated that the City would engage with between 3-5 established IT firms. The Civic Accelerator program would be limited to 3 emerging IT firms.

Feasibility: Based on the early interest from established IT firms it is anticipated that finding 3-5 established firms to develop concepts for technology is very feasible. The City has already

engaged with the Startup Zone on the opportunities of a Civic Accelerator Program and they were keenly interested in supplying their services to facilitate this endeavor.

Cross-Sectoral Working Group: In addition to an internal inter-departmental team to provide guidance and feedback on the development of the final proposal, the City will develop its Cross-Sectoral Working Group made up of external agencies in the youth and mental health sphere. Key members of this cross-sectoral will include the Public Schools Branch; the PEI Division of Canadian Mental Health; PEI's Chief Public Health Office, UPEI, Holland College, representatives from various youth programming entities and community centres (Confederation Public Library, Confederation Centre of the Arts, SportsPEI, Rec PEI, Murphy's Community Centre – Teen Zone, Eastlink Centre, Bell Aliant Centre) a representative from the research design group (described below) and a representative of PEI Bridge. PEI Bridge is an established working group that collaborates on solving service delivery issues on specific cases and is made up of representatives of Police Services, Department of Education, Child Protection, Social Programs, PEI Family Violence Prevention, Mi'kmaq Confederacy of PEI, Probation Services, Public Health, Adult Protection, Mental Health and Addictions and Victims Services. The Cross-Sectoral Working Group will meet bi-weekly with the Project Coordinator and with the IT firms selected to guide smart technology development and develop supporting initiatives.

Outcome: The development of the Cross-Sectoral Working Group will ensure that all partners are formally engaged in the project design and that when it comes time to implement the players are all in place.

Scope/Size: All relevant partner agencies will be invited to have a representative join the Working Group. For those agencies that decline a place on the working group, alternative communication and feedback methods will be proposed.

Feasibility: Most of the relevant partner agencies have already been approached and have expressed interest in taking part in the project design. Feasibility will be achieved through effective working group design – election of chair and development of terms of reference with clearly defined roles. Administrative support for planning meetings, creating agendas, taking minutes will be committed.

Research Design: As it is anticipated that data collection and analysis will be a large component of the project and that the City is committed to delivering a project that is evidence-based, the proposal will require research expertise to guide the project design. The City is fortunate to have several excellent academic assets in the community including the Young Lives Research Lab which has already committed to support this project in the next phase for the research design and ethics approval and will also connect the City and this project to a wide network of social science and humanities professionals and researchers. In addition to YLRL, the City has already connected with the Chief Public Health Office which recently released PEI Children's Report 2017 which provides an established baseline of key indicators of child health and well-being in PEI. Dr. Shamara Baidooobonso, Provincial Epidemiologist with the Chief Public Health Office has already expressed interest in supporting this project in the next

phase for contribution to data collection models, as well as supporting the design of evidence-based public health promotion initiatives focused on youth mental health.

The UPEI School of Sustainable Design Engineering will support research into emerging smart technologies that could contribute to improving youth mental health resilience and the youth mental health system. Their work will address any gaps that may not be covered in commercial partnerships.

Outcome: Research partnerships will ensure that the project includes scientifically-approved data collection methods; that proposed initiatives are evidence-based and connect the project work to other researchers in the field on a national and international level.

Scope/Size: UPEI Young Lives Research Lab, the Chief Public Health Office and the UPEI School of Sustainable Design Engineering (SSDE) will be the three primary research partnerships that support the project design and implementation.

Feasibility: The City already has research contracts in place with UPEI SSDE on other projects that are working well and both YLRL and the Chief Public Health Office have already shown support to the project.

Public Consultation Process: The Project Coordinator, in collaboration with the City's Sustainability Department and Communications Department will develop a public consultation that will provide regular opportunities for the public to contribute to the project design. The City Sustainability Department have all been trained in the Art of Hosting method of public consultation and have delivered several public events using Open Space Technology on sustainability, food security and climate change mitigation. This approach will be taken again on the topic of addressing youth mental health through smart technologies at two events to gather input from the public. Leading up to these events, the City will offer a speakers series which will include topics such as opportunities in Smart Cities technologies and current challenges in youth mental health in Charlottetown delivered by partner agencies and contracted firms. This will increase knowledge in the community of Smart Cities technology and mental health challenges that will adequately prepare them to confidently contribute to the consultation event.

Outcome: A speaker series on relevant topics will be held for the public to learn more about youth mental health and technology. Two public consultation sessions will be offered to contribute to the project design and the final application.

Scope/Size: Both the speaker series and the two public consultation sessions will be open to all members of the public.

Feasibility: Sustainability Department staff are trained and experienced in delivering public consultation and can support the Project Coordinator in delivering the consultation program. The City's Communications Department is able to promote all events.

Youth-led Design: The City recognizes that in order for the project to be successful it is very important that youth are empowered and engaged throughout the project design and implementation. A strong

focus will be placed on ensuring that the design of the final project reflects the needs and wants of the youth of Charlottetown. The City's Youth Retention Advisory Board with staff support from the Project Coordinator will lead the development of a youth engagement program that will ensure youth of all ages can contribute to the design of the project. The City will leverage the partnership with the Public Schools Branch to share information with students through school and provide in-class or afterschool opportunities for input. A hands-on workshop designed for youth will also be offered on smart cities technologies and delivered in partnership with the Confederation Centre Public Library, the Murphy's Community Centre – Teen Zone and at each of the City's Community Centres. The City will rely on contracted firms to develop workshop content that is hands-on, fun and geared to a young audience.

Outcome: Youth are actively engaged in the design of the project and educated on the opportunities of smart cities technologies.

Scope/Size: A youth focused YDAY event to gather feedback will be offered and a smart cities technology workshop geared to a young audience will be offered at a variety of locations.

Feasibility: The City's Youth Retention Advisory Board is established and has already recognized youth mental health as part of their mandate through their Your City Your Vision report. They have delivered a number of successful initiatives to date and have expressed interest in participating in this project.

Openness and Transparency: Openness and transparency are important values for the City and an area of continuous improvement. A public request for proposals from established IT firms and a public request for proposals from emerging firms to participate in the civic accelerator program will be issued following standard City communication protocols as defined by PEI's Municipal Government Act. All public events and consultation sessions will be widely promoted in both digital and print media as well as publicly advertised. Regular updates on the Smart Cities Challenge project will be published on the Smart Cities Challenge page of the City's website and summarized at public Council meetings.

Information Sharing/Interoperability: Information will be shared readily and all contracts with IT firms will specify the open source nature of the project. Research design will be shared with national and international research networks through the Young Lives Research Lab. Project concept will be shared at the Atlantic Summer Institute for Healthy and Safe Communities annual conference in August 2018 with regional agencies.

Scalability/Replicability: All project participants will be asked to consider the project's potential for scalability at regular intervals in the project design. The Project Coordinator will be responsible for ensuring this weaves through the discussions and the final proposal.

Other uses of data/innovation/technology: The request for proposals issued for established and emerging IT firm partners will reference the desire to examine the opportunity for other uses of innovation and technology. The UPEI SSDE will support this project goal in their research and the Chief Public Health Office and YLRL will also be asked to support this project goal with regards to data collection and analysis methods.

Question 7:

Please describe the ways in which your preliminary proposal supports your community's medium and long-term goals, strategies, and plans. (500 words max)

To supplement your response, please provide any relevant documents and make clear linkages and references.

5/100

The City of Charlottetown recognizes that residents are the foundation of the community. Residents that are thriving contribute great things to their communities – they connect with each other in family and friendship; they contribute to the local economy by working and/or supporting local business; they volunteer and support those in need; they create art and music and celebrations that make the community vibrant. In order to thrive they need many things – safety; a healthy environment; and opportunities to grow and contribute. These needs coincide with the service areas of the City – police and fire protection services; parks & recreation programming; economic development and job creation; events and social programming; and community planning, infrastructure and parklands.

A mentally resilient population makes a strong community. It is a community where:

- citizens are reaching their potential
- citizens feel that they belong, they are included, and have a community to be part of
- citizens have an opportunity to shape our community, they are engaged in decision-making and they contribute to Charlottetown being a great place to live
- citizens have the opportunity to enjoy their life, they have access to greenspaces, transportation, community facilities and enriching programs
- citizens can face hardships but come together to support each other and move forward

These values and goals are encompassed in all of the city's strategies and plans including the City's Integrated Community Sustainability Plan (People & Places, pp. 28-29; Arts, Culture & Heritage, pp.31-32; Active Healthy Living, pp. 34-36; and Nature, pp. 36-37) and the Your City Your Vision –Youth Retention Report: recommendations 1 (p.4); 4 (p.4); 7 (p.5); 10 (p.5); 11 (p.5); 13 (p.5);16 (p.5) and 18(p.5).

The City of Charlottetown recognizes that the youth is the next population of decision-makers and will shape the future. By working to address mental health challenges of our youth and to contribute to strengthening and maintaining mental health resiliency the City is making a substantial investment in the future. The benefits of this investment will be felt in the fabric and vibrancy of the community in the future but will also result in tangible economic benefits in reduced emergency mental health care, reduced crime and substance abuse, and reduced social assistance costs that are associated with long-term untreated mental health and wellness issues. The costs of these programs to Charlottetown and to the Province of PEI are significant and any reduction in these costs that can be achieved by investing in

mental health promotion and prevention stands to greatly benefit the community financially in the future.

Question 8:

Please describe your community's readiness and ability to successfully implement your proposal. (1,000 words max).

- 1. Experience with implementing complex projects (i.e. multi-stakeholder, multi-dimensional) that span multiple business lines and functional units.*
- 2. Structures, processes, and practices in place or planned for managing and implementing complex projects that span multiple business lines and functional units.*
- 3. Organizational strengths and potential weaknesses for managing and implementing a smart city proposal, and plans to address weaknesses to ensure successful proposal management and implementation.*

10/100

Experience Implementing Complex Projects:

Overview: The City of Charlottetown has managed a number of complex projects over the past decade including the implementation of tri-municipal transit system that now has over 500,000 passenger fares per year; the growth of its sports tourism focus which has earned the City national and international recognition; the completion of its combined sewer separation project; and the completion of a revenue sharing agreement with the Provincial Government in 2017. The size of Charlottetown, its commitment to partnership development and the leadership of Mayor, Council and senior Management has meant the City has been successful in tackling big projects and seeing them to completion.

Integrated Community Sustainability Plan: In 2010, the City adopted its first Integrated Community Sustainability Plan (ICSP) and in 2017, City Council adopted the updated ICSP. With close to a decade in commitment to sustainability the City has tackled many multi-stakeholder, multi-dimensional projects to produce a number of positive outcomes. The City has developed partnerships between the Water & Sewer Utility, Sustainability and the Provincial government to partner on a number of public outreach initiatives, programming and regulatory changes around water and energy efficiency. Through sustainability initiatives the City maintains academic partnerships with the UPEI Climate Lab, the UPEI School of Sustainable Design Engineering and Holland College. While the focus of the ICSP initiatives to date might be slightly different than that of youth mental health, the principle is the same; bringing all the right people together to think about big community issues, and effectively addresses challenges together.

Structures, Processes and Practices:

Cross-Departmental Collaboration: The City of Charlottetown has been actively working to encourage cross-departmental cooperation on projects and has formed a number of cross-departmental working groups in areas including, but not limited to, urban watershed management, active transportation,

infrastructure coordination, events management, and social housing. This commitment to collaboration has strengthened interdepartmental relationships, communication, project design and implementation. A cross-departmental team will be formed on this Smart Cities Project to provide direction and input for the final proposal and in the implementation phase of the project. This team will include representatives of Sustainability, Parks & Recreation, Information Technology, Police Services, Economic Development, Events Attraction and Tourism.

Partnership Development and Management: The City contributes financially and operationally to a number of organizations that are relevant to the project including the tri-municipal public transit system; the Bell Aliant Sports Complex; the Murphy's Community Centre Teen Zone; the Confederation Centre Public Library; the Confederation Centre of the Arts; the Arts Guild; the Eastlink Centre; the Boys and Girls Club; and many sports-based programs. The City has positive working relationships and active partnership agreements in place with all of the above and has maintained these relationships for many years. These partners, as well as those external agency partners that are referred to in Question 10, will be active participants in the project design and execution as they all have assets that can support the outcomes of the project. An advisory board of partners will be developed in order to provide direction and input for the final proposal and in the implementation phase of the project.

Reporting Structure to Council: At the direction of the CAO and the Mayor, it has been decided that the Smart Cities file and any subsequent projects including the Smart Cities Challenge will be housed under the Department of Sustainability. This department already manages a number of cross-departmental projects and includes a Sustainability Officer, a Sustainability Outreach Officer, a Sustainability Projects Officer and a Community Energy Planner as well as administration support. The Environment & Sustainability Standing Committee is chaired by the City's Deputy Mayor, Mike Duffy and includes additional members of Council, Councilor Jason Coady and Councilor Kevin Ramsay as well as the CAO. This committee meets monthly and reviews and approves all environmental- and sustainability-focused projects. All Committee and Council meetings are open to the public and are publicly advertised as required by the PEI Municipal Government Act.

Proposal Management:

Strengths: As described above and in Question 10, the City has a strong commitment to partnership development and maintenance. Achieving great things in a City of Charlottetown's size requires effective collaboration in order to be as successful as possible and that is recognized in day-to-day operations and in strategic thinking by staff, management and Council. Charlottetown's size is also a great strength as it allows for all relevant parties to be accessed and included in decision-making. It is very possible here to bring everyone together. This will be very important in tackling an issue like youth mental health and work is already well underway to bring all partners together on this project. Charlottetown also has a lot of strength in its level of community engagement. The Charlottetown community is very engaged in the wellbeing of their neighbours and in community development as a whole. Attendance at community consultation and public events are always high; there are high rates of volunteerism and voter turnout is some of the highest in the country. An engaged community will be very important in the success of the final proposal and the implementation of the project because

addressing youth mental health will need to take place at the individual, family, community and societal level.

Weaknesses: The greatest weakness that would impact the probability of success of this project is capacity. The City Corporation is small and departments are already managing many priorities. The City currently has one IT focused staff. This capacity issue is always addressed by partnerships, as described above and in question 10 enabling the City to do much more than it could in isolation. The grant of \$250,000 will be essential to pursue a project of this scope and magnitude. The grant funds will allow the City to hire a project coordinator, engage in-depth with the community and with partners and will also allow us to engage the expertise of IT professionals and firms that can assist the City in developing a plan to tackle youth mental health with a Smart Cities lens.

Question 9:

Describe your plan for using the \$250,000 grant, should you be selected as a finalist. Provide a high-level breakdown of spending categories and an accompanying rationale. (500 words max)

5/100

Work plan for Grant:

Summary: Please refer to question 6 for the full description of the work plan if the City receives a \$250,000 grant.

Budget for Grant:

Project Coordinator: \$60,000 for salary, wages, and office equipment

Rationale: A project coordinator is recommended so that the project benefits from being the full focus of one contract position.

Commercial Sector Engagement: \$135,000 for contracts for both established IT firms and development and implementation of Civic Accelerator project with emerging IT firms.

Rationale: In order to identify both existing technologies and innovative new solutions a large portion of the total grant will go towards contracts with established and emerging firms.

Cross Sectoral Working Group: \$5,000 for honorariums, materials, administrative costs and any required travel for members of cross-sector working group.

Rationale: Engaging key partners throughout the project design will be essential to ensure the project meets the needs of the youth mental health field and addresses root causes. The time commitment may be substantial and so an honorarium is suggested to support local agencies that would not have the capacity to commit time otherwise. This working group will also be

engaged to oversee implementation if the final application is successful and to work on other project regardless of the funding decision.

Research Design: \$20,000 for evidence-based research design including data collection processes, ethics approval and facilitation of any required permissions and security protocols for working with data collection partners.

Rationale: The City has already engaged research partners through the Applied Sciences Department of University of PEI, the Chief Public Health Office and the Young Lives Research Lab. Designing a project that is evidence-based, includes effective means for evaluation, has targeted outcomes and uses ethical research method is highly important for the overall project outcomes and the ability to share the project with others.

Public Consultation Process: \$7,500 for speakers, venues, advertising and supporting promotional materials for speakers series and for public engagement process.

Rationale: Public consultation is a required component of the project. The Project Coordinator and Sustainability Department staff will deliver both awareness and capacity building elements and feedback gathering events at a relatively low cost.

Youth-led Design: \$7,500 for workshop development, venues, advertising and supporting promotional materials for youth workshop and youth engagement process.

Rationale: Engaging youth from the beginning will ensure that the final project design reflects the needs and wants of the demographic that it is targeted towards. Partners will coordinate this part of the project with IT firms providing support on workshop design and delivery.

Information Sharing: \$7,500 for webpage development, events and conference attendance, promotional materials, development of project kiosk and communications support.

Rationale: Grant dollars in this area will be focused on sharing information through print and digital media including webpage development with resources; developing a project kiosk that can be brought to all relevant events; and covering the costs to relevant events and conferences.

Training: \$7,500 for training for City staff, partner agencies, and City Council.

Rationale: The City currently has only one IT staff focused on network administration. In order to lead Smart Cities project training will be used to support a culture of innovation among City staff.

TOTAL: \$250,000

Question 10:

Describe the partners that are or will be involved in your proposal. Where partners are not yet determined, describe the process for selected them. (500 words max)

- 1. A description of existing partners (what type of organization, what they do, etc.), their relevance, and expected contribution to the outcome (or outcomes).*
- 2. Where partners are not yet determined or where it is anticipated that additional partners are required, describe the process for selecting them.*

10/100

Confirmed Partnerships:

PEI Division of Canadian Mental Health Association (CMHA): The Canadian Mental Health Association/Prince Edward Island Division is a non-profit mental health agency promoting the mental health of all Islanders.

Relevance and Contribution: PEI CMHA has many years of experience offering community-based mental health programming. They will be a key partner in designing the final project as well as a key contributor if we are successful.

Young Lives Research Lab (YLRL): YLRL is the research community of Dr. Kate Tilleczek, Professor, and Tier 1 Canada Research Chair in *Children and Youth in Global and Local Contexts* (SSHRC funded). The YLRL is located at the University of Prince Edward Island.

Relevance and Contribution: YLRL will connect us to an international research network on youth mental health and will contribute to the project by ensuring an evidence-based design and opportunities for scalability.

University of Prince Edward Island – School of Sustainable Design Engineering (SSDE) at UPEI

Relevance and Contribution: SSDE has a strong industry-partnership focus and will provide research on the technological components of the project as well as support commercial partnerships.

Chief Public Health Office: The Chief Public Health Office (CPHO) is a division within the government of Prince Edward Island's Department of Health and Wellness.

Relevance and Contribution: CPHO is responsible for the development and implementation of the Children's Report 2017 and has access to public health data that will be instrumental in the project design. They will contribute to the project design and be a key contributor to implementation through public health programming.

Public Schools Branch: The Public Schools Branch (PSB) encompasses all 56 English public schools across Prince Edward Island and serves approximately 19,000 students from kindergarten to grade 12.

Relevance and Contribution: The PSB currently delivers a number of school-based initiatives focused on support growth mindsets in PEI schools and has access to school-based data that will contribute significantly to the project design. PSB will be an active partner in project design and implementation.

The Atlantic Summer Institute on Healthy and Safe Communities (ASI): The Atlantic Summer Institute is based in Prince Edward Island and organizes annual conferences on health promotion that fosters collaboration across sectors of health promotion, social development, crime prevention and community safety. They have an active Advisory Committee that includes representatives from the four Atlantic Provinces was formed to guide the process.

Relevance and Contribution: The theme for ASI's conference taking place in Charlottetown, PEI in August 2018 is *Let's Act Together! Developing a whole society approach to promoting child and youth mental health*. This conference will bring together all stakeholders and contributors from across Atlantic Canada. If the City is a successful finalist in the Smart Cities Challenge, the conference will be used as an opportunity engage with new and existing partners on the project.

Proposed Additional Partnerships:

Any additional partnerships will be formalized in the next project phase. Partners will be selected based on their current mandate as well as their ability and capacity to contribute to the project design and outcomes.

Question 11:

Please provide, if any only if required, confidential third party information. Information provided in this section will be exempt from the requirement to be posted online. (500 words max)

N/A

SECTION III: OTHER REQUIREMENTS

Required that it be completed by not part of the scoring

Question 12:

Provide a 200-word summary of your preliminary proposal. You may also provide an image that represents your preliminary proposal.

Charlottetown proposes to become a community focused on building mental wellness and resiliency amongst our youth. The project will result in improved mental wellbeing for City youth and provide co-benefits of improved physical wellbeing and reduced levels of substance abuse. The project will focus on preventative measures with the anticipated benefit of reducing treatment and intervention costs.

Appropriate use of technology will be central to engaging and assisting youth in their journey to improved self-confidence and developing the skills to handle life's challenges. The success of the project will be measured through program participation rates and evaluation of the impact on treatment costs. The Community recognizes the need to tackle mental health challenges. All parties approached have been very supportive of the initiative and are committed to finding solutions. The development of the Charlottetown's Strategic Mental Aptitude and Resiliency Technology will provide a model to be replicated across the Country.

Question 13:

Provide a link to the online location where you will post the full version of your of your application.

https://www.charlottetown.ca/events_initiatives/special_events_and_initiatives/smart_cities_challenge

Question 14:

In accordance with your governance structure, provide evident of the commitment to your preliminary proposal from your community's leadership. This can be a letter of support with signatures from your mayor(s), chief(s), or equivalent or a council resolution, a band council resolution, etc.

See application attachment folder

Question 15:

Please identify the point of contact for the application

Name: Ramona Doyle

Title and affiliation: Sustainability Officer, City of Charlottetown

Phone Number: 902-629-6613

Email Address: rdoyle@charlottetown.ca

Question 16:

Read the Privacy Notification, Consent and Release form, and Communications Protocol and indicate your agreement.

We agree with the terms.

SECTION IV: SURVEY QUESTIONS

Question 17:

Please provide the following information about your organization

1. Number of 2017 full-time equivalents (FTEs): 361
2. Percentage of total FTEs devoted to innovation: 5%
3. 2017 operating and capital budgets:
 - a. Total operating budgets \$60 million
 - b. Percentage of total operating budget devoted to innovation 5%
 - c. Total capital budget \$60 million
 - d. Percentage of total capital budget devoted to innovation 5%

Question 18:

Please select the focus area of your preliminary proposal

If you preliminary proposal seeks to achieve outcomes that span more than one area, you may choose up to two.

- Economic opportunity
- Empowerment and inclusion
- Environmental quality
- Healthy living and recreation
- Mobility
- Safety and security

Question 19:

Select all the community system/service areas expected to be implicated in your preliminary proposal. There is no limit to the number of community systems/service areas you may select.

- Arts and culture
- Economic development
- Education and training
- Emergency services and enforcement
- Environment
- Land use planning and development
- Public health
- Recreation and parks
- Roads and transportation
- Social services

- Waste
- Water and wastewater
- Other: please specify

Question 20:

Select all the technologies expected to be implicated in your preliminary proposal. There is no limit to the number of technologies you may select.

- Artificial intelligence (AI)
- Assistive technology
- Augmented reality (AR) or Virtual Reality (VR)
- Autonomous and connected vehicles
- Big data analytics
- Cloud computing
- Enterprise solutions
- Environmental monitoring
- Geospatial
- Health or medical technology
- Internet of Things (IoT)
- Mobile applications
- Networks
- Open data platforms
- Payment platforms
- Sensors
- Video analytics
- Wearables
- Other: Please specify