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Section 1 Applicant Information

Question 1 Community Information

Please provide the following information on your community.

- Name of community: City of Windsor and the County of Essex
- Province/Territory: Ontario
- Population: 398,953 (2016 Essex County Census Division – Includes City of Windsor)
- Indigenous community: No

Question 2 Prize Category

Please select a prize category.

- \$10 million (population under 500,000 residents)

Section 2: Preliminary Proposal

Question 3 Challenge Statement

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)

Response

We will build a bridge to prosperity for all residents of Windsor-Essex by leveraging partnerships, community resources and smart technologies that connect families to educational, employment, and health supports required to move our region's child poverty rate below the national average in 10 years.

Question 4 Proposal Outcomes

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

Response

Based on the 2016 Census, nearly one in four local children - 24% of children in Windsor and 22.6% in Essex County – live in poverty. Like the more than 17% of children facing poverty across Canada, they face daily challenges including malnutrition, educational impairment and social stigma, which limit their potential and long-term prospects for happiness and success.

The data is startling – especially considering that Windsor-Essex is experiencing a booming economy with an unemployment rate the lowest it has been in over 14 years, and one of the lowest in Canada. The challenge then is that many families in our community are still not sharing in the full prosperity and potential of our region. Hence, we seek to build a bridge to prosperity for all residents through innovative partnerships and technology that will allow more children to transcend the barriers holding them back from sharing in – and contributing to our region's prosperity, today and tomorrow.

During the course of our community engagement to identify the critical challenges facing our communities, we heard from residents living in poverty who shared their experiences and the difficulties they encounter in meeting basic needs of life. In one case, we met seven year old Ryan (identity protected), who lives in one of Windsor's historic lowest income neighborhoods. Ryan lives with his mother, in a single parent household. She knows there are employment opportunities in the booming

agricultural sector in the County but without a vehicle and access to regional transit options she has no way of getting to work every day. At the same time she feels limited by her high school education and lack of skills required by a booming local manufacturing sector. With nearly 2,700 job openings across Windsor-Essex in the month of March, Ryan's mom struggles to understand why so many jobs seem so close and yet so out of reach for her and her family.

Ryan's family receives limited social welfare and relies on the local food bank and charities which at times are insufficient to meet their basic needs. Ryan often finds himself going hungry telling us "I eat whatever we have from the food bank but find myself hungry during school before lunch. It makes it hard to pay attention during class."

His mother described her fears for future job prospects without the ability to develop the necessary skills to secure stable employment. She worries that if she cannot provide adequately for Ryan that his options will also be limited in the future. She notices that he is showing signs of difficulty in school with learning and making friends and hopes he can overcome these challenges to achieve his full potential but feels overwhelmed with how to help him given their current circumstances.

Ryan's case is not isolated, with many similar stories encountered across Canada. In our engagement activities child poverty was identified as a significant challenge within our communities. Our engagement revealed its complex nature is influenced by a range of factors including access to education, employment, health and support for families. This community engagement also identified the drivers behind this challenge area and what technology opportunities and solutions can be used to help solve this issue for communities across Canada.

Like Ryan, a significant proportion of children in Windsor and Essex County struggle with access to food and high quality nutrition, with 19.1% of families experiencing food insecurity. In 2017, over 22,000 unique individuals/families engaged one of the Windsor Essex Food Bank Association locations, totaling over 120,000 visits in the year. This snapshot represents an estimated one quarter of all food bank usage in our region as there are over 70 food banks in Essex County.²

The impact of this can be seen in the educational outcomes achieved in our region associated with living in poverty. The United Way/Centraide Windsor-Essex County study on Childhood Poverty in Windsor-Essex released August 2015 demonstrated the link between poverty factors such as hunger and educational outcomes. Test scores compiled for the region in this report indicated results for literacy at most grades lower than the provincial average³. In some areas, 2017 EQAO results indicated less than 1/3 of Grade 3s could read or write at the provincial standard.

The United Way also reports⁴ that mental health is particularly acute with adolescents experiencing negative impacts such as poverty outcomes at home and in the community. Rates of mental health referrals in Windsor-Essex County experienced a 50% increase in 2008 coinciding with significant job

¹ Percent of Households that Experience Food Insecurity (Moderate or Severe Food Insecurity) in Windsor-Essex and in Ontario by Two-Year Period

<https://www.wechu.org/reports/food-security-windsor-essex-2007-2012>

² **United Way/Centraide Windsor-Essex County** reporting data

³ Overcoming the Odds Youth Poverty Report, August 2015 p7

⁴ Overcoming the Odds Youth Poverty Report, August 2015 p5

losses in the local economy. In our interview with Ryan, he shared his difficulty making friends at school and often finds himself alone during lunch periods, “One day my friend saw me at the food bank and since then my friends don’t talk to me anymore and make fun of me.” This highlights how the experience of living in poverty can create feelings of isolation which may lead to mental health issues later in teenage years.

Many families across Canada and Windsor-Essex face the same challenge of securing well paid stable employment described by Ryan’s mom, with households in the region achieving a median wage of \$65,983 in 2015 less than the \$70,336 nationally⁵. Combined with the changing nature of temporary-part-time work in some sectors across Canada and the advent of new skills required in the workforce, this makes it difficult for families to afford the necessities to support a household with children. Job seekers throughout the region are faced with requirements for new skills as technology creates disruption in the traditional manufacturing and automotive industries. The Brookfield Institute reports⁶ that many regional economies are susceptible to automation with an estimated 48% of jobs in the Windsor area at risk of automation. This indicates that new skills are needed for job seekers to adapt to technological changes to achieve job mobility and job security in the future.

Our Windsor-Essex core working group reviewed well established research⁷ that recognizes childhood poverty as a complex social issue influenced by a range of factors that can persist throughout all stages of life. The group additionally worked through a series of exercises to fully identify, map and understand the key drivers and influencing factors for childhood poverty in our region applying their vast experience of working in the local community. Given the broad influences, it is clear that we need to employ a coordinated suite of initiatives targeted at each of the influencing factors in order to see sustainable improvements that allow the future generations of our region lead happy prosperous and fulfilling lives. We will seek to deliver positive outcomes for the following influencing factors as part of Smart City Vision over the next decade:

- Education: Our children will have the tools they need to succeed through improvements in literacy. Furthermore, to ensure our youth are adaptable and able to engage in our technological future we will develop initiatives to increase their digital literacy necessary to thrive in a tech-based knowledge economy.
- Healthy Living: All children living in low income households will have access to affordable, nutritious food and mental health support.
- Sustainable Employment: Residents in low income households will have access to resources for effective retraining in the skills of the future for adaptable job mobility and will have the multi-modal transit options necessary to connect to the many job opportunities across Windsor and Essex County.

Local partners within our region have long been engaged with the community delivering valuable supports and initiatives to help those in need. However with data clearly indicating that increasing numbers of our children are becoming more vulnerable to poverty related outcomes, we must strive to

⁵ <http://www.statcan.gc.ca/tables-tableaux/sum-som/l01/cst01/famil107a-eng.htm>

⁶ *Automation across the Nation: Understanding the potential impacts of technological trends across Canada.* Brookfield institute

⁷ https://academic.oup.com/heapro/article/30/suppl_2/ii102/643035

deliver more significant improvements and maintain a dedicated, widespread focus on this critical issue. The outcomes we have identified are in recognition of the need to be more ambitious. Through the collaboration of the City, the County and numerous regional stakeholders we will implement smart solutions targeted at these critical influencing factors contributing to childhood poverty.

Our Core Working Group, formed of representatives from a range of local government and community organizations presented and reviewed data to identify the region's most challenging issues. Within the data outlined above, there is an overwhelming amount of evidence that poverty is one of our region's most critical issues.

Additional challenges such as health and employment were identified as key drivers contributing to the state of poverty in the region. This view is supported by well-established research that references these factors as directly influencing poverty. We have therefore targeted these influencing factors of health, employment, education and family supports for improved outcomes through our smart city initiatives.

We presented the data and challenges identified in our stakeholder engagement exercises (described in Question 5) and consistently received feedback indicating Poverty as a critical challenge in the community. The challenges associated with health and employment were also raised as a concern by stakeholders further reinforcing their inclusion as outcomes to be achieved for reduction of childhood poverty. In an online survey assessing community priorities to be resolved through smart city approaches, 32% stated poverty, while 30% indicated health and the remaining 38% indicating employment.

Our region feels strongly that addressing the challenge of children in poverty is an important element of achieving our Windsor-Essex vision for a prosperous region in the future. Our challenge statement supports this and incorporates outcomes that deliver improvements in other challenge areas of health and employment identified by stakeholders and evidenced by data.

Our region offers a wide range of services, resources and programs to those in need. However, the challenges of poverty persist in our region with the rate of children living in poverty at its highest reported rate of 24%, significantly above the national rate of 17%. This suggests that while we have services available, technology and innovation is needed to address the factors that result in increasing numbers of our children living in poverty.

The case of Ryan, reflected in our discussion of the poverty related challenges in our region are not isolated and are seen throughout the country. Statistics Canada reports in 2015 that 17%, 1.2 million⁸ children in our country are living in poverty. While the UNICEF Report Card Series, Measuring Child Poverty 2016⁹ which compares child poverty in the world's advanced nations reports 13.3% children (aged 0 to 17) are living in relative poverty¹⁰. Canada ranks 24 out of 35 countries for this measure. This

⁸ <http://www12.statcan.gc.ca/census-recensement/2016/as-sa/98-200-x/2016012/98-200-x2016012-eng.cfm>

⁹

https://www.unicef.ca/sites/default/files/legacy/imce_uploads/DISCOVER/OUR%20WORK/ADVOCACY/DOMESTIC/POLICY%20ADVOCACY/DOCS/unicefreportcard10-eng.pdf

¹⁰ Defined as living in a household in which disposable income, when adjusted for family size and composition, is less than 50% of the national median income.



demonstrates a significant proportion of our future generation is facing challenges of achieving positive outcomes.

The application of smart solutions can provide opportunities to drive significant improvements in the factors influencing poverty. Many of which can be delivered cost effectively, rapidly implemented and replicated. Examples of successful smart solutions that can be applied to our influencing factors to achieve targeted outcomes for reduce childhood poverty are outlined below:

Health: Russian grocery chain Utkonos has successfully implemented community pantry lockers to increase accessible options for communities.

Education: Providers such as edX and Coursera have created digital platforms to educate individuals from different global education systems.

Employment: Bangladesh has created an eGovernment web portal which was developed to provide more convenient access to various government services and information through one window.

We have identified a range of measures to assess the impact of our initiatives on our targeted outcomes. These measures aligned to our target outcomes are outlined below:

Healthy Living: Use of foodbanks across the region, children with access to mental health care

Education: Literacy rates, Number of students enrolled in STEM programs

Employment: Number of participants in retraining programs, increase percentage of residents using public transit to commute to work

We intend to establish a community oversight group for our future smart cities phases which will work in tandem with our core working group to monitor progress in development and implementation of our smart solutions. A suite of tools for project tracking during delivery and monitoring post implementation such as dashboard reporting will be developed to enable monitoring of our progress. We intend to make these reporting mechanisms available to the public to provide a high degree of transparency with our endeavors. This will also support further discussion with the community and continue our stakeholder relationship in line with our stakeholder principles outlined in Question 5.

Question 5: Community Residents: Shaping Our Challenge Statement

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)

Response

Our SCC vision is to develop effective smart solutions that address the most significant challenges impacting our region to improve lives within our communities. Engaging with our local communities is central to this objective to ensure that we fully understand our most pressing needs, and to maintain ongoing dialogue to ensure that we effectively meet them.

We have developed an ambitious stakeholder engagement strategy designed to engage local residents in a continuous dialogue on community needs and opportunities for smart solutions aligned to our vision for a smart Windsor-Essex - throughout the SCC application process and beyond. Our engagement strategy is founded on the following core principles:

- **Collaborative:** We aim to create a highly collaborative environment with our stakeholders to ensure common understanding of challenges, generation of ideas and support for solutions.
- **Diverse:** Our region is diverse, featuring a wide range of groups who may be impacted by different challenges and have different insights that are invaluable to shaping a smart region. We will ensure our smart city approaches reflect the diverse range of thought and rich ideas for innovation within our region.
- **Accessible to all:** In order to achieve our goal of a community informed and supported smart city vision, we must make every effort to ensure that communities across our region are aware of and able to engage with our smart city conversation.
- **Continuous Conversation:** Our vision for a smart region will be realized over the long term therefore it is important that we are continuously engaged with our communities to understand their needs and gain insight on potential and implemented solutions.
- **Innovative Engagement:** We will actively seek innovative ways to discuss smart city options with our communities.

Engagement Strategy

Our engagement strategy applies the principles outlined to a series of events, allowing our communities to inform, support and engage with us on an ongoing basis. This section describes our engagement efforts to date.

Core Working Group

Our smart city vision and application is spearheaded by a core working group comprised of representatives from local organizations across the Windsor-Essex region. This group brings a diverse range of experiences and perspectives through their work in the community to provide valuable input to the smart city process and to identify key challenges within the community. Key partners involved in our core working group include:

- City of Windsor
- County of Essex
- Connecting Windsor-Essex
- WindsorEssex Economic Development Corporation
- United way Centraide Windsor Essex County
- University of Windsor
- St. Clair College
- Workforce WindsorEssex
- Essex-Windsor Emergency Medical Services (EMS)
- WEtech Alliance

Community Engagement

We have targeted engagement with our local communities using a range of accessible engagement formats, providing opportunities for all to get involved and inform our challenge statement and generate solution ideas. Community engagement efforts to date include:

- Press Event (March 23rd): Event with key stakeholders and media announcing the participation of Windsor-Essex in the Smart Cities Challenge, highlighting the historic and ongoing importance of smart city approaches within our region.

- Social Media Engagement (Ongoing): Social media campaign through Twitter and Facebook to raise awareness of our smart cities plans, interact with and gain insight from our residents.
- Windsor-Essex Smart Cities Website: Website providing information on our Smart Cities vision and progress along with opportunities to engage, provide feedback on challenges in the community and generate ideas.
- St. Clair College Student Executive (April 4th): Targeted engagement with students to raise awareness and discuss their views on priorities for the region. Employment and housing were raised as significant priorities.
- ProsperUS Community Representatives (April 6th): Engagement event raising awareness of WE Smart Cities approaches and exploring community challenges. Feedback was directed to our website for survey responses.
- Essex County Libraries (14 branches across Essex County; April 9th, 10th, 16th, and ongoing within branches): Engagement sessions intended to assess community priorities from Library staff who are engaging on a daily basis in programs targeting key issues such as employment. Library staff will also function as Smart City Champions in the community, raising awareness and providing community feedback on smart city plans.
- University of Windsor Student Executive (April 11th): Targeted engagement with university students to understand their perspective on challenges within the region. Poverty and employment were the most significant challenges with accessibility and transportation within the region seen as major barriers.
- Windsor Express Game (April 11th): Public engagement at local basketball game. Members of our working group engaged with attendees about our smart city plans and discussed the region's most pressing issues. Attendees completed live online surveys and engaged in group discussions. 10 Groups discussed challenges with one identifying health as the most significant challenge, 4 identifying poverty and 5 identifying employment.
- Festival de la Poutine (April 13th): Community engagement event raising awareness and seeking feedback on community challenges with estimated attendance of 600.
- Hacking Health St Clair College (April 14th): Engagement at St. Clair College event promoting our Smart Cities plans and seeking ideas and engagement from the student community.
- County of Essex Public Engagement (April 16th): This session with 45 residents of Essex County focused on understanding views on community challenges. Healthcare identified, however this was connected to poverty and employment.
- Vanier Student Centre (Week of April 16th) – Information and engagement pop-up targeted at students.
- Local call-in Radio Program - The Lynn Martin show – AM 800 CKLW (April 18th): Discussed SCC, local challenges, and directed listeners to the web site.

Future Engagement

Our engagement strategy is designed to continue the smart city conversation within our communities to maintain focus on smart opportunities and our vision. We will maintain many current methods aligned to our engagement principles. Our strategy will also be reviewed periodically by our core working group to ensure appropriate targeting of stakeholders and use of feedback to shape consultation events.

As we progress, we will seek more innovative ways to generate discussion with all demographics within our region. We will work with residents and local partners to further define smart solutions through



initiation of a community consultation group, additional partnership outreach e.g. live demonstrations of solution options, use of community centers such as libraries as smart innovation hubs, and testing different options for smart solution development.

Stakeholders: Shaping our Challenge Statement

Our engagement strategy seeks to demonstrate a clear line of sight from our Smart Windsor-Essex Vision to the identification of challenges and their underlying issues, to the evaluation of potential smart solutions – all informed by feedback from our communities. Our vision is outlined in Question 7.

Our core working group completed a number of exercises to identify the most pressing challenges facing the region, and how our vision could inform and guide potential smart solutions. The group conducted research and leveraged past community engagement performed by key partners such as United Way/Centraide Windsor-Essex County, the Windsor-Essex County Health Unit and Workforce Windsor Essex along with thought leaders in smart cities to identify the current challenges and opportunities within the region.

A long list of challenges was identified and aligned to the elements of the smart city vision. Interactive exercises combined with surveys were used to further define a short list of priorities - Health, Employment and Poverty - along with associated drivers. We then consulted with local communities to confirm these priorities and their main contributors, and identify smart solution opportunities and ideas.

A wide range of stakeholders were consulted using various mediums, including online, radio, face-to-face and targeted public engagement. Engagement program highlights include:

- Number of stakeholders providing direct feedback: 500
- Online survey responses from all Windsor-Essex areas: 245
- Respondent indication of education attainment: Post-secondary degrees (71%), College or other degrees (15%) and High school degrees (1%).
- Indication of Employment: 88% of respondents currently employed
- Internet access: 6% of respondents do not have internet at home.
- Mobility: 84% of the respondents commute to work by car.
- Median Annual Household Income of respondents: \$76,000 to \$100,000.
- Household type: Majority of the respondents (48%) are married (without children) and 28% of respondents have children with 6% of respondents in single parent families.

The final 'Key Priority' distribution is:

- Employment 38%
- Health 30%
- Poverty 32%

Results highlight that all three challenge areas are of roughly equal importance within the community. Due to the numerous interrelationships between these challenges, and their respective drivers, there was a clear opportunity to embrace an integrated strategy, focusing on addressing common needs within each area. This view was supported by public engagement sessions, with several highlighting the relationships between the priority areas as demonstrated by the feedback below:

- *“Problems are interconnected – Health is tied to employment and poverty.”*
- *“Poverty can be improved with better education and therefore improve employment opportunities. Health improves with end to poverty and poverty ends with more employment opportunities.”*
- *“I have worked with students whose basic needs are not being met. They come to school hungry, they don't have clothing that fits properly, they don't have access to sports and extra-curricular programs and they don't have someone at home to read with them.”*

Question 6 Preliminary Proposal Description

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

Response

We have proposed 5 key activities to achieve our poverty related outcomes of Healthy living, Sustainable Employment and Education for the future. These targeted activities will deliver multiple benefits and contribute to all of our outcomes identified as key drivers of poverty in region. These activities are outlined below.

Activity 1: Service Alignment. This activity will support the centralized collection, management and analysis of community poverty and support data to better identify, target and optimize services across the region. Work will utilize cloud storage, advanced analytics and machine learning technologies to identify and monitor key trends and metrics, and business intelligence tools to provide stakeholders, service providers, and the public with tailored dashboards and updates on services and their availability and performance within the community. This will help government entities understand the needs of different communities and break down barriers between different government departments to coordinate services, enabling faster objective based decisions.

With the open database, the impact of different services can be transparent to the public. The activity can be leveraged with existing tools including Windsor’s open data system, County of Essex Interactive Mapping, and Windsor-Essex Economic Development tool. The activity can be implemented using a phased rollout adapting different datasets into a centralized location and development of dashboards or data interfaces. An open central database will help enable other technologies like robotic advisory, chatbots (for the public) and intelligent traffic systems to distill the information for different users (public, government workers and council).

Activity 2: Improved Connectivity. This activity will use technology, communication and transportation as a bridge to prosperity for residents in low income neighborhoods. In looking at improved connectivity we identified opportunities for connectivity in two areas: information and infrastructure. Work will utilize:

- Online resources to reach the individual with barriers to travel
- Digital learning to improve the digital literacy
- Free Wi-Fi to connect vulnerable communities and technology devices
- Digital device reuse and borrowing to decrease the cost of digital ownership
- Subsidized ride-sharing for vulnerable groups to increase their mobility

We will leverage technologies including mobile applications for a better interface with the public and local organizations, big data analytics to optimize the functions of connectivity and decrease the cost of education with augmented /virtual reality to create a more immersive experience for learning.

Improving digital literacy and providing opportunities for the individual to connect online will increase their skills and future employment outlook. This activity will help the public by increasing their digital literacy to better connect both physically and digitally to their communities. The “Tech Hub” of Windsor Public Library has a program to let users have a hands-on access to technologies such as Arduino (for robotics and coding learning), 3D printing (for model building) and tablets. This activity can help extend the reach of the “Tech Hub” to allow for more accessible learning. Ride Sharing is already operating in Windsor Essex region and partnering with them will help the Region transform into a multimodal transportation system where private and public transportation work together.

Activity 3: Enhanced Nutrition. This activity will increase healthy eating within the region through education and lowering barriers of access to healthy foods. Work will utilize farm-to-school initiatives for farmers to distribute healthy foods which are surpluses or not suitable to be sold but still nutritious for school lunches. A healthy eating app and workshops to educate children and family about healthy eating and community pantry lockers to decrease the barriers (both location and time) to access healthy foods. We will leverage technologies including big data analytics to optimize logistics for Farm-to-School, mobile application and augmented reality for education about types of, and methods of, preparing healthy foods and automated lockers to store healthy food options for collection. The farm-to-school program will help provide an opportunity for the school system to provide healthy meals at an affordable cost. The healthy eating app and the community pantry locker can provide the region with information on the healthy eating of different demographics. Essex County has a high concentration of greenhouse growers and a robust agri-business industry, which has capacity to fulfill the needs of Windsor-Essex. United Way also has partnerships with some farms to gather surplus or unsold food to support their food banks.

Windsor Essex already provides 30,000 students from low income families with breakfast. The farm-to-school program will be an extension of that program to increase the reach of health food programs. The community pantry lockers will enable shift workers with irregular work hours or homes far from stores to purchase healthy foods. We will partner with United Way to understand the healthy food habits of vulnerable communities and create programs (including subsidies) to support those communities.

Activity 4 One Window Access

This solution is for development of a single portal of access for social services and supports. Currently those seeking services, particularly multiple services, need to register to different programs with unique registration mechanisms for each. Our proposal is to apply cloud-based, open data technologies with data analytics and machine learning for an intuitive solution where those in need of social services can register their details to the portal and are automatically recommended services based on the information they have provided. This service will include:

- Matching of users to services based on information provided, services used and information reviewed.
- Connect users with social workers who can provide virtual advice through online chat or video functions
- Capability to book appointments, and manage service used.
- Enable ease of registration to service with a user profile
- Provide an array of potential transportation options

This activity will support achievement of multiple target outcomes such as family support, employment and education. It is a technology enabled solution that will provide ease of access, flexibility and time



savings for vulnerable families in need to understand and utilize the full range of social supports available to them. As more users access the system, predictive analytics will identify trends that can be used to realign resources and provide better service to those accessing the system and policy makers.

The solution will be available to all those in our region seeking access to social supports, particularly the more vulnerable families in need. The solution will be made available through a website and mobile application and available in locations throughout the community such as local service offices and libraries for those who do not have computer or internet access.

Activity 5: Skills for the Future

We propose to develop an innovative education and training program to support our current and future workforce in developing critical skills needed for employment in a technologically advancing environment. This solution includes the following features:

- A cloud-based application for job seekers and students to be matched with dedicated mentors in the community and local businesses who will guide them through the program. This application will also allow users to manage participation in training programs such as time locations, access study aids for courses, arrange meetings with mentors, etc.
- Training programs developed in collaboration with businesses and technology providers to ensure relevant content applicable for the current and future job market.
- Use of augmented and virtual reality training labs located throughout the community in education centers, schools libraries or local employers to deliver training programs.
- Job matching services and opportunities accessible via the application linked to existing services such as Workforce Windsor-Essex.
- Collaborative approaches involving a range of stakeholders across the community such as mentors from school-based STEM programs such as FIRST Robotics, local business and learning centers, leading to opportunities for work placement and apprenticeship.

This activity will deliver our outcome of developing an educated workforce equipped with the skills and knowledge needed for future job mobility and adaptability. It employs advanced technologies to create a wide range of connections and is a holistic solution for education, training and employment options featuring strong links to the local community through collaboration with local businesses and organizations.

This solution will be available to all students and job seekers in our region with a particular focus on those disadvantaged who are seeking access to critical resources. A mechanism that brings a multitude of technology enabled learning and employment opportunities along with mentoring and guidance support does not exist, illustrating the transformative and ambitious nature of this proposal. We intend to measure our progress through those participating in the workforce and receiving retraining.

Solutions for all

Our challenge statement targets improvements in childhood poverty with our region, by delivering technology enabled activities for the key drivers of poverty such as sustainable employment, education for the future, family support and healthy living. This was indicated as a clear priority for our community in our engagement feedback. We strongly believe this is a demonstrable issue for our country as whole.



It is therefore our aspiration that the solutions developed here can be applied throughout the country to help our children in need and provide positive outcomes for their futures.

Our proposed solutions feature accessible, established technologies such as open data platforms, data analytics and machine learning that are replicable and can be widely applied throughout Canada. In our future planning phases we will work to ensure that our solutions maximize value and protect our communities through the use of flexible solutions and accessible multipurpose platforms.

In order to ensure the success of these solutions we must also work to ensure integration with existing systems and process. We will use change management principles to ensure this is addressed as outlined in our response to Question 10.

Furthermore we intend to engage with wider smart city communities to share information and gain insight on best practices and challenges for implementation. Our hope is to create an open collaborative environment with smart cities for the benefit of all within our region and beyond.

Question 7 Strategic Alignment

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

Response

Our approach to Smart City opportunities is founded on the long term strategies for our communities to be healthy and prosperous. Windsor-Essex recognizes the opportunities provided by smart solutions to realize benefits and overcome challenges to achieve these long term strategies. The application of smart solutions means that benefits can be delivered cost effectively, rapidly implemented and widely adopted.

Our Core Working Group, including representatives from organizations who have knowledge of our communities and are shaping the strategic long terms plans of the region, worked collaboratively to create an integrated vision Smart Windsor-Essex Vision by reviewing the content of the region's development strategies.

The key strategies reviewed include:

- City of Windsor 20-Year Strategic Vision
- County-Wide Active Transportation (CWATS) master plan
- Windsor-Essex Community Foundation's Vital Signs Report
- County of Essex Housing with Supports program
- County of Essex – Road Planning & Transportation Master plan
- Community Improvement Plans (for available municipalities within Windsor-Essex)
- Strategic Plans (for available municipalities within County of Essex)

Reviews of these strategic plans revealed consistent themes of economic development through a focus on economic diversification and supporting job seekers, sustainable and green practices, innovation, providing a safe community, accessible healthcare and social supports and promotion of healthy living.



The resulting Smart Windsor-Essex vision, incorporating these themes will serve as a valuable framework for our current application but is also an enduring vision for building Windsor and Essex as the smart region of choice. The key components of the Smart Windsor-Essex vision include aligned to long term strategies are:

Connected: We use transportation and communication systems and technology to conveniently and effectively connect people and businesses with each other, within the region, and to the world.

Protected: We deliver responsive and effective services and supports throughout the region to provide a safe and caring environment that allows people and businesses to thrive.

Livable: We provide a robust economy, and a stable and supportive environment that draws people to the region to live work and play.

Green: We are vigilant in protecting of the environment, providing our citizens with a safe and healthy place to call home.

Innovative: We enable personal development and growth opportunities allowing business and educational institutions to attract, develop and retain the best and the brightest in high-demand fields.

Well Governed: We maintain stable and transparent government driving a robust regional economy and providing aligned and effective programs and services to citizens and business.

This vision sets the direction for a smart Windsor-Essex and is the starting point for developing a clear line of sight from our goals through to identifying challenges in the community aligned to the drivers of those challenges and possible smart solutions that can be applied to realize this vision. We have used this vision to shape our engagement with our stakeholders and to develop the exercises and consultation with our core working group and the public, to define the challenges aligned to realizing this vision.

Question 8 Implementation Readiness

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

Response

Windsor-Essex and its partners have considerable experience with smart solutions and major projects making us a well-placed candidate for Smart City Challenge funding to deliver benefits to our residents. Our region was named one of Intelligent Community Forum's Top 7 Intelligent Communities of 2011 for collaboration among government, business and academia that initiated transformative work for a more diverse economy. Engaging in the Smart City Challenge will continue this history of working with multiple stakeholders to develop innovative solutions to improve Windsor-Essex.

Our organizations have well experienced Planning and Infrastructure Services Teams responsible for assessment and delivery of complex projects requiring public consultation work, coordination of multiple stakeholders, working across departments and with other local government organizations. We are also experienced in the delivery of collaborative projects managed through project sponsors, dedicated personnel across functions teams and Memorandums of Understanding with multiple stakeholders.

A selection of our major projects and smart city initiatives demonstrating our capabilities to deliver is summarized below:

- Connecting Windsor-Essex are recognized for their work in expanding fibre optic networks through Windsor-Essex connecting rural and urban areas with high speed broadband.
- The Computerized Traffic Signal System: Employs "distributed" system design, by implementing intelligent units at all on-street locations and an Advanced Traffic Management System (ATMS) at the Traffic Operations Centre. provides resilience for continuous operation of system to residents
- The Central Riverfront Implementation Plan consisting of a series of projects for development of a multi-use riverfront space over the long term.
- Detroit Windsor Tunnel is critical infrastructure within our region and is the responsibility of the City of Windsor who have managed significant maintenance projects in the past.
- Ontario Centres of Excellence – Autonomous Vehicle Innovation Network-Regional Technology Development Site - Partners: Windsor Essex Economic Development Commission (WEEDC), City of Windsor, University of Windsor, St. Clair College – Technology Partners
- Institute for Border Logistics and Security (IBLS) and the Cross Border Institute (CBI) – Partners: City of Windsor, Windsor Essex Economic Development Commission (WEEDC), University of Windsor, Canada Border Services Agency (CBSA), US Customs Border Protection (CBP), Windsor-Detroit Bridge Authority (WDBA) Detroit Economic Growth Corporation, and American Centre for Mobility, with various Technology Partners.

In addition we have established a core working group of smart city leaders across the region to lead our Windsor-Essex vision for this application and ongoing. This group features key representatives from the City, County and core partners who are all experienced with smart initiatives and have collaborated on a range of prior initiatives.

We intend to use our well developed, existing governance structures, where possible, during implementation of our smart city initiatives. This will reduce any duplication of work and maximize efficiency of stakeholder efforts and time. However we recognize that these structures may not be appropriate for some smart city initiatives depending on the type of activities, projects and partners and stakeholders involved. We will execute a smart cities readiness assessment for a range of areas, including our governance structures, to ensure they are appropriate and robust for delivery of the selected smart cities initiatives.

We strongly believe that we have significant core capabilities to deliver effective smart solutions however recognize that all major programs are susceptible to weakness and should be actively reviewed and mitigated.

Our key strengths to support delivery of smart solutions include:

- Experience: As demonstrated above our region and partners have extensive experience with smart initiatives already.
- Capability: We have teams of well trained and experienced in implementation of smart solutions and major projects.
- Collaboration: Our region has a long history of collaborating with organizations and partners on a wide range of projects and leveraging innovation and ideas for improvement across the region. These well-established relationships means we can work seamlessly and make decisions quickly for effective implementation.

We have established an ambitious vision for a Smart Windsor Essex that extends beyond the Smart City Challenge application. To fully realize this vision, we need to be prepared and develop effective capacity throughout the region to deliver this vision. We therefore propose to execute a smart city readiness assessment during the next phase of our application to develop a robust view of current state of readiness, identify areas of improvement and develop mitigations and improvement plans.

A selection of possible challenges identified are described below.

- **Privacy and Data Ownership:** Maintaining data privacy is critical and we must ensure robust processes and mechanisms are in place to manage this during implementation of our smart solutions. We will work with our experienced partners to understand best practice and develop appropriate options.
- **Cyber Security:** Security and data protection are critical considerations of implementing smart solutions we will need to ensure we have the appropriate controls to meet these concerns.
- **Change Management:** A comprehensive approach assessing the impact of new technologies in the community to avoid any detrimental or counter intuitive impacts. Integration with our existing infrastructure, both physical and virtual, must be considered along with future resilience and ability to respond to future disruption. These considerations may impact the benefits and our subsequent choice of solutions.
- **Managing multiple partners:** Implementation of multiple smart initiatives may involve many stakeholders and partners, to ensure we drive solutions to achieve our goals and realize value, additional reporting and monitoring mechanisms may be needed. We will also need to ensure effective contract terms, conditions and management of partners.
- **Capacity Building:** Our vision for a Smart Windsor Essex is for the longer term, while we will rely on partners to support development of initiatives, we will need to ensure knowledge transfer and capacity building within the region to achieve our vision.
- **Flexibility:** Our partners and technologies will be carefully selected to ensure flexible smart solutions. We will use our advisory partners, and consult with other smart cities to avoid these challenges.

We will consider options including Program Management Office, Senior Project Sponsors within participating organizations, and periodic reviews to monitor and control our capabilities to deliver.

Question 9 Finalist Stage Planning

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)

Response

If selected as a finalist in the Smart Cities Challenge, Windsor-Essex would seek to use the \$250,000 grant to develop a robust business case and implementation plan guiding the roll out of solutions to help achieve our target outcomes. We have outlined our intended expenditure and rationale to support this planning phase below.

Community Engagement (\$30,000): We have committed to a transparent approach through ongoing discussion with our communities to understand their needs and generate ideas. We intend to use

funding for marketing our options and solutions and innovative engagement with the community such as live demonstration of potential solutions, immersive hands-on experiences with smart solutions under consideration and 'sprints' for idea generation.

Professional Services & Prototyping (\$60,000): Our region would seek to engage professional services experienced with delivery of all aspects of complex project life cycle, innovation and are active thought leaders in smart cities. These services can deliver invaluable insight and expertise to maximize value in the development processes and solutions selected to deliver more for our communities. We would use these services to support the following:

- Smart City readiness assessment
- Development of tools for feasibility assessment
- Solution screening assessment
- Planning materials to assess timing requirements, costs benefit analyse and impact of solutions

Solution Screening (\$120,000): In the following phase we would seek to further define our candidate solutions. We would seek to engage in a structured screening process to assess the benefits, impacts and costs of candidate smart solutions in collaboration with our stakeholders and solution providers. This exercise would include initial workshops, interviews, feasibility assessments and demonstrations. For candidate solutions with community support, we will also execute targeted pilot studies to evaluate the full potential of the solution.

Capacity Building (\$40,000): We anticipate a smart city readiness assessment will indicate a lack of IT expertise within the local government function and region, we would therefore seek to ensure that limited expertise is available for assurance and oversight of smart city projects by the City and County.

Question 10 Partners

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

Response

A core working group brings a diverse range of perspectives to provide valuable input to the process, and will continue to support during development and implementation of solutions.

Our core partners

- Connecting Windsor-Essex is a non-profit consortium that has successfully implemented a fibre-optic network across Windsor-Essex, which is foundational to an Intelligent Community.
- WindsorEssex Economic Development Corporation is a not-for-profit organization advancing economic development in the region. They have provided insight into the current state of our regional economy and will support effective solutions for employment related outcomes.
- United Way/Centraide Windsor-Essex County is a non-profit organization working to raise funds and invest in improving lives in our communities. They are central to understanding child poverty in our region which has shaped our challenge statement and will support stakeholder engagement, development and monitoring of effective solutions.
- University of Windsor is a comprehensive, student-focused university leading innovation and contributing vital research for improvement of the region. The University is a leader of innovative solutions in the region and has provided valuable input to development of our application.

- St. Clair College provides a wide range educational options for the region and is a staunch supporter of the local community and economy. St. Clair College is a core partner and will continue to provide support and leadership for the advancement of the community.
- Workforce WindsorEssex is an independent, community-based organization developing our regional workforce and providing views of the current state and future economic and social development needs of Windsor-Essex. They will contribute to our outcomes to improve employment solutions for families living in poverty.
- Essex-Windsor EMS provides extensive pre-hospital emergency medical care throughout our region. They understand the health challenges faced by residents and current application of smart initiatives. This valuable partner will support our Smart City solutions to protect our children living in poverty and deliver outcomes related to mental health.
- WEtech Alliance is a Regional Innovation Centre whose mission is to accelerate technology companies, champion innovation in the community, and help build the tech talent pipeline in Windsor-Essex.
- Windsor Essex County Health Unit, working in partnership with other agencies and health care providers, is an integral organization within our community committed to the overall health and wellbeing of Windsor Essex residents.
- Canadian Mental Health Association Windsor Essex County is a lead provider and advocate of community mental health services through treatment, collaboration, education and community engagement.

We will establish relationships with leading technology vendors and solution providers within our region. Through existing partner relationships, we can leverage these connections to bring industry leading insights and solutions to bare in addressing the contributors to child poverty within Windsor Essex.

As we further define solution options for our target outcomes, we will use structured interviews to assess the capability of partners before moving to a formal procurement process. With help from our partner, KPMG Centre for Collaborative Procurement we will work with stakeholders to apply collaborative contracting principles and methods to balance the need for speed and innovation with fairness and transparency.