Infrastructure Canada | Smart Cities Challenge

Oxford County, Blandford-Blenheim, East Zorra-Tavistock, Ingersoll, Norwich, South-West Oxford, Tillsonburg, Woodstock, Zorra

Applicant information

Question 1

Please provide information on the community that is submitting this application. If this application is being submitted by a group of communities, add each community separately using the button. If this application is being submitted by a regional entity, please include the name of the regional entity with each individual community (e.g. City of Dunn/Smith Region). Do not include the regional entity as a separate, stand-alone community.

Community (Blandford-Blenheim/Oxford County)

Name of community Blandford-Blenheim/Oxford County
Province or Territory Ontario
Population based on 7399
Indigenous community No

Community (East Zorra-Tavistock/Oxford County)

Name of community East Zorra-Tavistock/Oxford County
Province or Territory Ontario
Population based on 7129
Indigenous community No

Community (Ingersoll/Oxford County)

Name of community Ingersoll/Oxford County
Province or Territory Ontario
Population based on 12757
Indigenous community No

Community (Norwich/Oxford County)

Name of community Norwich/Oxford County
Province or Territory Ontario
Population based on 11001
Indigenous community No

Community (South-West Oxford/Oxford County)

Name of community South-West Oxford/Oxford County
Province or Territory Ontario
Population based on 7664
Indigenous community No

	## Community (Tillsonburg/Oxford County) **Name of community** Tillsonburg/Oxford County **Province or Territory** Ontario **Population based on** 15872 **Indigenous community** No ## Community (Woodstock/Oxford County) **Name of community** Woodstock/Oxford County **Province or Territory** Ontario **Population based on** 40902 **Indigenous community** No ## Community (Zorra/Oxford County) **Name of community** Zorra/Oxford County **Province or Territory** Ontario **Population based on** 8139 **Indigenous community** No
Question 2 Please select a prize category.	$10 million (population under 500,000 residents)

Problem definition

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.	Healthy, energy efficient, affordable buildings - where we live, work and play - are fundamental to community well-being. Through enhancement of data and technology, Oxford County's Building Transformation project will demonstrate a minimum 10% improvement in occupant health, a 50% reduction in energy consumption, and an overall affordability improvement of 10%.
Question 4 Please describe the outcome (or outcomes) your proposal seeks to	Setting the Stage for the Oxford Smart Cities Application: It stands to reason that if we are to improve the wellbeing of residents in our community our most impactful opportunity lies in where our residents spend most of their time. Across North America, that opportunity lies in our buildings. In buildings we live, we work and we play. We live in buildings that are private or

achieve by elaborating on your Challenge Statement.

This section should include:

- 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.
- 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.
- Evidence to support the selection of this/these outcome (or outcomes) over others, in reference to the needs of the community.
- Rationale for applying a smart city approach to achieving the identified outcome (or outcomes).
- Strategy for measuring progress toward outcome (or outcomes) and achievement of

multi-residential dwellings, owned or rented. We work in storefronts, malls, offices, industrial complexes and factories of all shapes and sizes that cross multiple sectors, provide a wide variety of services and create products. When not in buildings, we are likely on-route to another building and in doing so, are most likely encapsulated within another form of building, namely a vehicle whether private or public, alone or with a group of passengers.

According to the Heart and Lung Association, we in North American spend 90% or our time in buildings. A study published by the National Human Activity Pattern Survey (NHAPS) suggests we spend 87% of our time in buildings and another 6% of our time in vehicles. Research studies suggest the economic, social and physical environments that surround us can have a much greater impact on our health than how often we go to the doctor's office.

In 2014, Oxford began a community journey that would result in the comprehensive Future Oxford Community Sustainability Plan. The underlying desired outcome of the Future Oxford plan is to shape the Oxford of tomorrow by taking definitive action today. In 2016, 60.3% of Oxford residents reported a positive sense of wellbeing and 78% reported life satisfaction. Oxford is a vibrant small urban-rural community that is proud of what we have and dedicated to an even brighter future for all. The Future Oxford plan was developed on the premise that strong Community health and wellbeing will flourish within a vibrant economy that supports a clean and healthy environment.

As committed by Oxford County Council, achieving our Future Oxford vision includes achieving Zero Poverty. In 2016, 21.6% of Oxford households are living in core housing need (identified as living in a dwelling that is considered unaffordable, unsuitable or inadequate), 10.8% of our population is living in poverty and our social housing wait list has expanded to 1500 residents and families. There is no simple or single solution to addressing poverty in any community.

Notwithstanding, access to affordable housing can be transformational to those less fortunate. In addition, through Oxford County's commitment to 100% Renewable Energy we estimate that Oxford residents could reduce their building related energy consumption by as much as 50% through wiser, more thoughtful energy choices. New building technologies today can reduce heating and cooling energy consumption by as much as 90%.

Finally to the issue of community connectivity. As a founding member of the SouthWestern Integrated Fibre Technology (SWIFT) initiative, Oxford County has been an active participant in a Federal/Provincial/Municipal funding program designed to accelerate ultra-high-speed fibre broadband technology to small urban/rural communities across Southwestern Ontario.

| outcome (or outcomes). | With this in mind, Oxford's Smart Cities proposal brings the valued outcome of reducing poverty in our community while contributing to our 100% Renewable Energy goals through the transformation of new building construction. Where better to demonstrate the value of ultra-high energy efficiency where the housing created can also dramatically transform the health and wellbeing of the most vulnerable in our community. Our demonstration includes the building data collection and transparent information transfer that can only be accomplished through enhanced connectivity and an open data commitment. Oxford is committed to sharing building performance and 100% Renewable Energy data and achievements.

The Oxford Approach

Creating a healthy, affordable and energy efficient place to live, work and play is a pre-requisite to further development of all other aspects of sustainable living. Before people can begin to consider higher level thinking (such as innovation or environmental awareness) we must first address core needs. Addressing Shelter is the highest priority and most impactful to our wellbeing.

County Council has recognized the importance of expanding affordable and social housing in our community and has aggressively pursued its development through partnership and direct investment. In 2015 Council adopted a "Housing First" policy that ensures surplus property owned by the County is either re-purposed for affordable residential development or monetized for direct investment in affordable housing. Since the adoption of this industry leading policy, Oxford County has worked with the Private and Not for Profit housing sector, investing $3,997,795 in Federal/Provincial Investment in Affordable Housing (IAH) funds along with an additional $3,138,275 in municipal funding. Combined, these committed investments result in 126 housing units that have been developed or are approved for design and construction. Eighty (80) of the new housing units are being developed to Passive House and/or EnerPHit energy standards, projected to reduce energy consumption by up to 80-90% of traditional Ontario Building Code requirements.

Quality and affordable housing is transformational to those living in poverty. Affordability is enhanced dramatically by building energy performance. In addition to building energy performance, air quality and comfort levels is substantively enhanced within Passive House/EnerPHit standard buildings.

Through our Smart Cities proposal, Oxford can dramatically enhance the lives of the most vulnerable in our community. Our proposal demonstrates that our Future Oxford Community Sustainability Plan implementation will be accelerated through |

connected technology and data outcomes associated with the built environment. With buildings and our most vulnerable population as the focal point of our program, we will demonstrate the Future Oxford plan through advanced building technology. Open data and public dialogue illustrating the results will empower others to follow.

The Future Oxford Community Sustainability Plan is best illustrated by the three pillars of sustainability. In fact, advancing Economic vitality, Community health and wellbeing and taking definitive action to enhance our natural Environment is the essence of the Oxford Smart Cities application.

The Oxford Smart Cities approach will:

1. Emphasize Affordable, Accessible and Energy Efficient Shelter Using Advanced Building Technologies:
 • Reduces Core Housing needs in our community
 • Reduces the financial burden, time and stress through housing stability for the most vulnerable
 • Improves the personal security and stability of the most vulnerable
 • Enhances the personal wellbeing, mental and physical health of the most vulnerable by:
    – Creating disposable income to address food insecurity
    – Opportunity for improved diet and exercise
    – Enhanced in home air quality and comfort
 • Advances Oxford's commitment to achieving Zero Poverty enhances our overall Community Wellbeing
 Directly enhancing Oxford's COMMUNITY (Health and Wellbeing)

2. Advanced Building Technology Implementation Led by the Not For Profit sector will:

• Demonstrate the value of advanced building technologies
    – Capital cost effective
    – Operating cost effective - conserves energy by reducing building related energy use/costs
    – Reduces greenhouse gas (GHG) emissions
    – Reduces dependency on fossil fuels

• Advances Oxford's commitment to achieve 100% Renewable Energy

• Optimize opportunities to advance the value and application of renewable energy opportunities (Solar, RNG, energy storage) through Net Metering and Virtual Net metering applications
    – Enhances our natural environment and eco systems
      Reduces waste, support Oxford's commitment to achieving Zero Waste
    – Enhances air quality
    – Reduces Climate Change risks

| | • Improves community health and wellbeing

• Creates economic growth through new and expanded business opportunities

• Enhances the viability and community value of an Oxford Sustainability Cluster (Living Lab) for Technology commercialization research and development in partnership with academia and industry

• Enhances community readiness and support for entrepreneur growth/development and that will advance:
  – Renewable energy solutions and technologies
  – Advanced Zero Waste technologies and programs
  – Agricultural advancements
  – Stimulate social enterprise
  – Create enhanced arts, culture and educational opportunities
  – Enhance community access and connectivity
  – Enhanced access to medical care and other services that enhance wellbeing
  – Open data sources
  – Information sharing
  – Demonstrating sustainability achievements and performance
  – Encourage accelerated implementation and achievement Directly enhancing Oxford's ECONOMY, COMMUNITY (Health and Wellbeing), and ENVIRONMENT.

Proposal Openness

By using shelter as the nucleus of our Smart Cities plan, we will link every aspect of our sustainability plan back to our built environment. Starting with the most vulnerable residents in our community, we will establish a high-performance place of shelter that will enhance quality of life for the occupants, while setting a stage for advancement of other services. It is not enough to design, model and construct a building; post-occupancy performance and ongoing data mining and analysis of outcomes (technology and social) will form the basis for our demonstration.

All lessons learned through each building connected technology and data outcome will be leveraged across all other sectors within Oxford County and shared with any municipality across Canada interested in learning with us.

Oxford County has already set the stage for sharing and transparency of our Smart Cities approach through the Oxford County Internet project page Build-Better (Blossom Park). We invite readers to visit this site and monitor our progress in real-time by partnering with us in this journey through your comments and questions.

Proposal Integration

Our building projects are modeled to several standards, including Ontario Building Code, Passivehouse, EnerPhit standard and Canada Green Building Council Zero energy building standards. But that is just a beginning. Our building projects will experience extensive performance monitoring and reporting and by design, will be required to address sustainability themes as noted above. Ongoing communication with stakeholders and partners will be conducted, with success and failure outcomes analysed in the spirit of continuous improvement.

Our Build-Better approach transcends the concept of building technology as a means to an end. Silos are inherently created simply by not taking the approach to building outcomes far enough. By designing the six data and connected technology themes that are outcomes of our sustainability plan, we propose that barriers between technologies and services will dissolve naturally.

Proposal Transferability

All identified improvements and linkages to other sustainability themes are inherently transferable across sectors and across jurisdictions throughout Canada.

Linkages from multiple service themes, via building technologies that are based on a goal of improving quality of life within the context of a limited environment will naturally drive value transfer. We are not addressing multiple services in isolation; we are in effect, transferring value to people and organizations through subtle integration of multiple services, and doing so where people are located, most of the time.

Concepts and outcomes developed through our approach to building technology and data will be immediately transferable, and as we improve processes and outcomes, this transfer of knowledge will only accelerate.

Proposal Collaboration

Collaboration is at the root of our Sustainability Plan and by incorporating the service concepts of well-being, eco-system, innovation, connectivity, energy and zero waste into the built environment, we engrain the concepts of collaboration across multiple sectors.

Building on the spirit of our Future Oxford Partnership and Sustainability plan, partnerships will continue to mature and the various elements of our sustainability plan develop as a result of

creating the story of connected technology and data harvest through the built environment.

The Oxford baseline

In 2016, Oxford County created an energy and waste baseline profile with a goal of identifying energy consumption and waste generation across all sectors and from every resource. This baseline has since grown to include a community-wide Greenhouse Gas (GHG) inventory. In 2018, we intend to continue building on our baseline approach to include drivers of poverty within our community.

Our sustainability plan includes several very aggressive goals that include targets, timelines and milestone dates. These goals are helping us to establish programming and milestone accomplishments that would otherwise be intangible; all of our goals must be driven by established baseline data if we are to be successful in our measurement of outcomes.

Thinking back to the sections of collaboration, transferability, integration and openness, it becomes apparent that multiple services must converge and work from a commonly understood baseline.

In November 2017, Oxford County Council adopted a resolution to target Zero Poverty in the County. Our first building project will tackle the challenges of affordable, healthy housing for those with mental health and addiction challenges.

In 2016, 21.6% of Oxford households do not meet core housing need, 10.8% of our population is living in poverty and our social housing wait list has expanded to 1500 residents and families. There is no simple or single solution to addressing poverty in any community. Notwithstanding, access to affordable housing can be transformational to those less fortunate.

• Evidence to support the needs of the community
Our projects aim to illustrate that technology already exists to tackle many of the challenging aspects of poverty, affordability and healthy environment. Our first project (Blossom Park) will be constructed to Passivehouse standard and will demonstrate that energy requirements for heating and cooling can be reduced by up to 90%, indoor air quality can be substantially improved and utility costs can be substantially lowered. Furthermore, performance data will be harvested and studied to both validate our claims and to identify required areas of improvement where outcomes fail to meet expectations based on modelling predictions.

By enhancing the built-environment and integrating multiple services through the lens of poverty reduction and quality of life, we believe our approach will accelerate multiple human

services in ways that other initiatives with a single outcome cannot come close to achieving.

• Rationale for applying a smart city approach
The Smart City approach as defined within The Smart Cities Canada Challenge parallels the Oxford Community approach to accomplishing goals. Our Future Oxford Sustainability plan is based on the same core values. We have demonstrated this through our many outcomes that span the very same service improvements represented in the Smart Cities Challenge guideline.

Even before the Smart Cities program launch, Oxford County and partners were in the process of planning a Sustainability Cluster concept; an approach that would combine technology and social innovation and incubator/living-lab concepts based on a campus style approach and through collaboration with multiple partners.

• Strategy for measuring progress
Most of our baseline studies required for establishing a baseline are already in place. Our sustainability plan includes 70 outcomes that continue to be measured and adjusted and we continue to monitor and adjust outcomes through ongoing monitoring and reporting (through both internal and third party audit and reporting processes).
In terms of connected technology and data outcomes of our building projects, we have an established team of research scientists from academia, private sector professionals (both volunteer and contract) and members of staff from across multiple services.

A primary focus of our Smart Cities Build-better approach is to plan for expected outcomes, design to aggressive performance standards (Passivehouse for example), apply stringent quality control and to conduct comprehensive and long-term performance monitoring that includes building performance, occupant comfort and cost-effectiveness (from both a capital and O&M perspective).

Question 5 Please describe how your community residents have shaped your Challenge Statement. Describe your plans for continuing to engage and involve them in	Four years in the making, Oxford County's challenge statement is underpinned by the Future Oxford Community Sustainability Plan vision: "A vibrant, prosperous, and responsible Oxford for all." This statement is at the core of the many initiatives the County is currently pursuing, including 100% renewable energy by 2050, zero poverty, and zero waste. The Plan and its vision are the product of a grassroots community campaign undertaken in 2014 and 2015. The goals and targets under the Plan's three pillars—community, economy and environment—were arrived at through "face to face" citizen engagement at World Cafes, information meetings, and "kitchen table" collaborations, as well as through online engagement tools like crowdsourcing, comment forms and a wiki.

your final proposal going forward.

This section should include:

- Descriptions of previous engagement with residents, businesses, organizations, and other stakeholders on topics related to the Challenge Statement.

- Descriptions of feedback that came to light through past engagement processes.

- Links between the Challenge Statement and engagement feedback.

- Evidence of efforts made to be inclusive and to represent the community's diversity.

- Plans to sustain engagement through the development and implementation of the final proposal.

Since the Plan's release, Oxford has reached out to its citizens at every turn on its path towards sustainability. Of particular relevance to its mission of building transformation, the County:

• Released its draft 100% Renewable Energy Plan to the community for comment, and has continued to work with its community liaison group, Smart Energy Oxford, to explore incentives for renewable energy, retrofits, zero-energy homes, passive housing, and other advanced low-carbon strategies. The Community Energy Survey in 2017 and the resulting Solar Oxford Challenge are outcomes of this work.

• Oxford County's municipal budget process included a community survey for 2016 and 2017 to allow residents to identify their priorities. Survey results for this past year showed that just over 75% of respondents believed the County's investment in community sustainability initiatives should be maintained or enhanced. Several comments expressed a sense of pride that the County is taking a leadership role in this area.

• Further, roughly 66% of budget survey respondents said community housing investment should be maintained or enhanced. Residents expressed knowledge and empathy for this issue through comments such as, "Housing is the base to community health, vitality and economy. In order for Oxford County to thrive, residents MUST have safe and affordable housing. Without housing you cannot sustain employment and other basic human needs."

• Public input on housing and homelessness in 2013 formed the basis of the County's 10-Year Shelter Plan, now updated annually. As the County's community housing policies have grown more sophisticated, its relationship with developers has also evolved, with the County actively working with developers to introduce Passive House standard to all municipal housing builds. The Blossom Park project is a landmark example of how stakeholder engagement and partnerships are making the ambitious aims of the Future Oxford Community Sustainability Plan achievable. Oxford County Council has already committed to a "Housing First" policy, in which proceeds from sales of surplus County-owned real property are redeveloped or reinvested to meet the growing demand for housing.
Oxford County's most impactful community engagement investment has been the Oxford Community Wellbeing Survey, undertaken with the University of Waterloo's Canadian Index of Wellbeing's research team. Oxford County is leading the way in this engagement. As one of only six Canadian municipalities to undertake the CIW based Community Wellbeing Survey Oxford has taken it a step further by correlating the Community Wellbeing Survey to the Future Oxford plan and using the survey data as a basis on which to assess our sustainability baseline from which we will set our targets and milestones and an ongoing monitoring program to track progress towards our sustainability vision.

	• Carried out in 2016, the survey of 11,335 randomly selected households (representing 25% of Oxford County's population) offered valuable insight into the determinants of wellbeing among our citizens, particularly for our most vulnerable populations. These insights validated the priorities laid out in the Future Oxford Community Sustainability Plan and further reinforced the connectedness of our community's social/community, economic and environmental needs. The final survey, available at CommunityOxford.ca, showed us that: – Respondents in the lowest income category (less than $40,000 annually) reported poorer quality of life on community engagement, accessibility, quality of work, health behaviours and perceptions, and environmental concerns. – Within a three-month period, respondents in the lowest income category were unable to pay their mortgage or rent 5.6% of the time; ate less, or didn't have enough money for food 20.6% of the time; and were unable to pay for other necessities 27.1% of the time. – Only 49.2% of respondents in the lowest income category reported very good or excellent mental health. – 84.7% of respondents in the lowest income category believe that have a personal responsibility to protect the environment. This data tells us three important things: those in the lowest income category have worse mental health outcomes than others, have difficulties paying their bills, and feel a sense of responsibility when it comes to the environment. This evidence has driven our Smart Cities approach to development by tackling affordability, health and wellness and environmental sustainability through one core concept: housing. • Public engagement is an ongoing process in Oxford County, and includes monthly Speakers Series, participating in community-wide events and multiple Future Oxford committee meetings, principally led by community leaders and supported by Oxford County.

Preliminary proposal details

Question 6 Please describe your preliminary proposal	By creating a Building Transformation project, Oxford County will demonstrate the goals of improving occupant health, reducing energy consumption and improving overall affordability can be met through proper building design, construction and finally,

and its activities or projects.

This section should include:

- Planned activities or projects to achieve the outcome (or outcomes) set out in the Challenge Statement.

- Clear links from the identified projects to the attainment of the outcome (or outcomes).

- 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.

- Measures put in place to 1) 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; and 2) enable other uses of the technology,

through building performance monitoring activities. This will include the development of occupant monitoring applications that utilize the data harvested by UWO building science researchers and in cooperation with our utility partners.

To accomplish this, we have begun to apply Passive House standard for all new community housing projects and demonstration of the net zero energy building concept.

In partnership with a not-for-profit social housing developer/operator, we have designed a 34 unit social housing project that will create an affordable, comfortable and sustainable living space for some of Oxford County's most vulnerable residents – particularly those dealing with poor mental health or addiction. By implementing aggressive energy reduction techniques, we will reduce heating and cooling energy loading to 15 kWh/m2, which is 80% lower than what the Ontario Building Code requires. Furthermore, this building will provide well regulated indoor air temperatures and exceptional air quality for residents.

With the help of the University of Western Ontario, we will install multiple measuring tools throughout the building to harvest data for the development of performance algorithms once construction is complete. Working with Ryerson University, we will leverage that data to be included in the Ryerson Future and Smart Cities program. Additionally, this data will be used to develop an experiential learning environment for members of the International Renewable Energy Academy, which we have hosted alongside York University for two consecutive years. Efforts such as these demonstrate our commitment to information sharing, education, connected technology, innovation and the power of compelling data.

By measuring our success, we hope to show the rest of the country that sustainable, affordable housing is possible. Our expected measurements will:
  • Demonstrate a reduction in building operation, utilities and maintenance costs
  • Illustrate energy efficiency improvements, which can play a meaningful role in poverty reduction by minimizing the cost of living
  • Prove that the quality of life outcomes in high-performance buildings are completely replicable and scalable within Oxford County and beyond
  • Demonstrate low carbon energy outcomes through building performance coupled with solar photovoltaic installation under a net metering agreement with the local electric utility
  • Show that lowered energy requirements enable total energy offsets through renewable energy resources in a cost-effective manner

The second example is the retrofit of a 1950's-era building to International Passive House Standard at 75 Graham Street,

innovation, and data in your proposal.	which is planned to operate as an incubator – or "living lab" – for continued training and development in the area of environmental sustainability, technological innovation, data sharing and social enterprise.
	Finally, our newest Waste Management building will meet the Canadian Green Building Council's net energy building standard in order to demonstrate practical low carbon outcomes in a non-housing setting. The waste management net zero energy building will be an operational administration facility for County waste operations, while doubling as a public education center. This net zero energy facility will include a 120 KW net metered solar installation complete with live energy (both load and renewable generation) and other relevant operational data that will available to anyone with an Internet connection.
	These projects are good for both the local community and society, as a whole. They represent positive action that will benefit our environment, our community wellbeing and grow our economy. Not only are we improving the lives of our impoverished residents by eliminating energy poverty and providing high-quality housing, but we are also demonstrating sustainable development, which will have lasting implications for future generations. We hope to motivate other communities to do the same, as we can all benefit with fewer greenhouse gas emissions and a reduced energy dependency.
	As stated by The Journal of Hunger and Poverty (2008), dealing with energy inefficiency at the local level will have an effect on all Canadians: "If energy is being wasted, it will become scarce and the result will be an increase in energy costs and taxes. Another main issue that concerns the Canadian population is energy conservation. Energy that is being wasted in low income households or in rental housing is part of the overall energy expenditure, therefore, contributing to energy conservation in low-income housing is something that all Canadians should be concerned with" (p.24).
	Scope and details of the specific advanced building technology projects in process are as follows:
	Blossom Park: • In partnership with not-for-profit social housing developer/operator, design and build a 34 unit social housing project to International Passivehouse Standard • In cooperation with developer, create affordable living space for some of Oxford County's most vulnerable residents • Ensure design outcome provides high level of air quality and extremely well regulated indoor air temperatures • By implementing aggressive energy reduction techniques in building design, reduce heating and cooling energy loading to 15 kwh/m2 (up to 80% lower than Ontario Building Code) • Based on energy performance, illustrate that lowered energy

requirement now enables total energy offset to that of renewable energy resources in a cost-effective manner
• Demonstrate how the above noted improvements will significantly reduce the cost of building operation (including utilities and maintenance)
• Demonstrate the potential of this concept to reduce energy poverty and how this approach can play a meaningful role in poverty reduction through cost of living mitigation
• Demonstrate how performance and quality of life outcomes of high-performance buildings are fully repeatable and transferable to other jurisdiction.
• Demonstrate low carbon energy outcomes through high-building performance combined with solar photovoltaic installation under net metering agreement with electric utility.
• Working with UWO, install multiple sensors throughout building and harvest data for development of performance algorithms
• Working with Ryerson U, leverage data for inclusion in Ryerson Future and Smart Cities program
• Working with York University, create a host location for IREA and develop experiential and lab learning environment

75 Graham Street:
• In support of the Blossom Park project concept, retrofit an existing building (vintage 1950's) to International Passivehouse Standard, applying the EnerPhit standard for building retrofit
• Based on Architectural review of building, complete interior retrofit of building design to EnerPhit standard
• Using the now high-performing building as a host, develop a Sustainability Cluster concept that will host social and technology innovation and an incubator for continued sustainability program training and development
• By working within a Passivehouse standard building, provide a 'living lab' environment to accelerate sustainability practices and expertise within and outside of Oxford County
• Demonstrate low carbon energy outcomes through high-building performance combined with solar photovoltaic installation under net metering agreement with electric utility.
• Working with UWO, install multiple sensors throughout building and harvest data for development of performance algorithms
• Working with Ryerson U, leverage data for inclusion in Ryerson Future and Smart Cities program
• Working with York University, create a host location for IREA and develop experiential and lab learning environment

Net Zero Energy Building (Oxford County Waste management facility)
• In support of Blossom Park project concept, design and build a net zero energy administration building to the Canadian Green Building Council's zero energy building standard.
• Demonstrate low carbon energy outcomes through high-building performance combined with solar photovoltaic installation under net metering agreement with electric utility.

	• Working with UWO, install multiple sensors throughout building and harvest data for development of performance algorithms
	• Working with Ryerson U, leverage data for inclusion in Ryerson Future and Smart Cities program
	• Working with York University, create a host location for IREA and develop experiential and lab learning environment
	
	Linking our Planned Outcomes
	
	Buildings form the nucleus of the application and basis for the story Oxford is delivering. The Future Oxford Community Sustainability Plan is best illustrated by the three pillars of sustainability. In fact, advancing Economic vitality, Community health and wellbeing and taking definitive action to enhance our natural Environment is the essence of the Oxford Smart Cities application.
	
	These projects will:
	
	1. Deliver Affordable, Accessible and Energy Efficient Shelter Using Advanced Building Technologies:
	• Reduces Core Housing needs in our community
	• Reduces the financial burden, time and stress through housing stability for the most vulnerable
	• Improves the personal security and stability of the most vulnerable
	• Enhances the personal wellbeing, mental and physical health of the most vulnerable by:
	   – Creating disposable income to address food insecurity
	   – Opportunity for improved diet and exercise
	   – Enhanced in home air quality and comfort
	• Advances Oxford's commitment to achieving Zero Poverty enhances our overall Community Wellbeing
	Directly enhancing Oxford's COMMUNITY (Health and Wellbeing)
	
	2. These Projects Advance Building Technology Implementation and will:
	• Demonstrate the value of advanced building technologies
	   – Capital cost effective
	   – Operating cost effective - conserves energy by reducing building related energy use/costs
	   – Reduces greenhouse gas (GHG) emissions
	   – Reduces dependency on fossil fuels
	• Advances Oxford's commitment to achieve 100% Renewable Energy
	   – Optimize opportunities to advance enhances value and application of renewable energy opportunities (Solar, RNG, energy storage) through Net Metering and Virtual Net metering applications
	• Enhances our natural environment and eco systems

- Reduces waste, support Oxford's commitment to achieving Zero Waste
- Enhances air quality
- Reduces Climate Change risks
• Improves community health and wellbeing
• Enhances the viability and community value of an Oxford Sustainability Cluster (Living Lab) for:
  - Technology commercialization research and development in partnership with academia and industry
    Enhance community readiness and support for entrepreneur growth/development and that will advance:
    Renewable energy solutions and technologies
  - Advanced Zero Waste technologies and programs
  - Agricultural advancements
  - Stimulate social enterprise
  - Create enhanced arts, culture and educational opportunities
  - Enhance community access and connectivity
  - Enhanced access to medical care and other services that enhance wellbeing
  - Open data sources
  - Information sharing
  - Demonstrating sustainability achievements and performance
  - Encourage accelerated implementation and achievement
    Directly enhancing Oxford's ECONOMY, COMMUNITY (Health and Wellbeing), and ENVIRONMENT

Measures to ensure broader application

The Oxford Smart Cities proposal will ensure our advanced technology building projects are open, interoperable, scalable, and replicable. Further, we believe these projects will stimulate technology applications, further innovation and provide open data sources that will demonstrate the value and impact of this leading work. We will ensure we deliver through:
• builder/developer/architect and Oxford County sharing all aspects of design, procurement, funding and lessons-learned
• building energy modelling outcomes will be shared
• building performance monitoring will be conducted for several years post-occupancy; all aggregated and individual data will be shared publicly (within the limitations of privacy law)
• Building energy performance outcomes will be monitored and shared publicly
• Additional metrics such as air quality, temperature, humidity and other occupant health and comfort attributes will be continuously monitored and Academic partners will harvest building data for purpose of creating performance and continuous improvement action to enhance building performance
• Capital and operation/maintenance costing will be reported and shared for the purpose of continuous improvement
Lessons learned through three unique high-performance building projects will be shared publicly for both proof-of-concept and

	replicability across building sectors in Oxford County and across Canada.
Question 7 Please describe the ways in which your preliminary proposal supports your community's medium and long-term goals, strategies, and plans. To supplement your response, please upload any relevant documents and make clear linkages and references.	Our Building Transformation proposal uses the built-environment as a stage to promote healthy, energy efficient, affordable living through inclusion and empowerment. We continue to shape our (1Community Sustainability Plan) through a series of goals, actions and planned outcomes, many of which rely on data and connected technology solutions. By its very name, (2aFuture Oxford) establishes a vision and long term strategy for Oxford's future. In late 2017, in cooperation with multiple partners, we created six unique stories that highlight Oxford's goals through the actions of individuals making a difference across multiple areas of focus, services and technology applications. Connecting with people where they live, work and play provides us with a unique opportunity to address multiple services through an exercise of (2bBuilding Transformation). Our proposal demonstrates how quickly our sustainability goals will be achieved by applying advancements of technology and data management. Creating a baseline from which we measure our progress across pillars of environment, community and economy is an important milestone. (2cOur Wellbeing) provides a snapshot of our community and will continue to be monitored through subsequent (3Community Wellbeing) reports throughout our journey. A strong voice is present in Oxford County through Economy, Community, Reforest, Smart Energy and Zero Waste Oxford committees, who meet monthly to map out our progress, all of which rely on technology advancements and applications with growing data needs. An example of our environmental effort is told through (2dRestoring Hodges Pond), which highlights the need and illustrates the depth of community and partnership effort to identify a problem and enact solutions in the field. As our country makes the transition away from GHG emitting fossil fuel, each Canadian community must engage in the development of low-carbon alternatives. Our (2e Mobility) story illustrates our progress to promote alternative mobility awareness, and empower our community to create the infrastructure required as identified through our electric vehicle (8Feasibility Study). Creating a Zero Waste community is an ambitious goal, yet grassroots community groups are proving that (2fJust a Single Bag of Garbage) is possible at large public events. It just takes a vision and a group of passionate citizens with a goal. An

	outcome of our Smart Cities Challenge preliminary application will include the advancement of our existing (7Draft Zero Waste Plan).

Oxford County is the first Ontario community to establish a goal of 100% renewable energy by 2050, an objective that is fundamental to many of the cultural and technology shifts underway in Oxford County. Our (4Draft 100% Renewable Energy Plan) is supported by our (5SEO 100%RE GHG Report and 6Infographic) resources and will evolve in tandem with those of our Zero Waste and emerging Zero Poverty plans.

The vision, partners and strategies are in place and will continue to evolve. Our Smart Cities journey will be told through from the perspective advancements in our buildings, where we live, work and play, and will begin with the most vulnerable in our community. Our story begins as we learn to (9Build Better).

1_Future_Oxford_Community_Sustainability_Plan_20150909.pdf (589.83kb)
2a Future Oxford April 2018.pdf (1.81mb)
2b Building Transformation April 2018.pdf (1.02mb)
2c Our Wellbeing April 2018.pdf (801.51kb)
2d Restoring Hodges Pond April 2018.pdf (1.13mb)
2e Mobility April 2018.pdf (1.11mb)
2f Zero Waste April 2018.pdf (724.75kb)
3_ Oxford Community Wellbeing report 2018.pdf (1.37mb) (coming in June 2018)
3_Oxford_Community_Wellbeing_Report_20161214.pdf (3.2mb)
4_Oxford_Draft_100RE_Plan_20160622.pdf (1.61mb)
5_SEO_100RE_GHG_Report_2016.pdf (2.52mb)
6_SEO_100RE_GHG_Infographic_2016.pdf (159.75kb)
7_Draft_Zero_Waste_Plan_20161928Upd.pdf (2.51mb)
8_EV Charger Feasibility Report 2018.pdf (2.4mb)
9_BuildBetter_April2018.pdf (1.96mb) |
| **Question 8**

Please describe your community's readiness and ability to implement your proposal successfully.

This section should include:

• Experience with implementing complex projects | The Future Oxford Community Sustainability Plan is guiding decisions that will impact quality of life in our community for generations to come. From protecting source water, to reducing waste, to caring for an aging population, the Plan put forward a decision-making framework. The Multi-Criteria Assessment tool that supports action that balances Oxford's unique ECONOMY, COMMUNITY (Health and Wellbeing), and ENVIRONMENT interests of our community.

Future Oxford was established in June 2014 when 15 community members were appointed by Oxford County Council to form a steering committee to begin developing Oxford's first Community Sustainability Plan. Taken from Future Oxford Internet site Following a year-long community engagement campaign, County Council approved the Future Oxford Community Sustainability Plan on September 9, 2015. In January 2016, the formation of |

(i.e. multi-stakeholder, multi-dimensional) that span multiple business lines and functional units. • Structures, processes, and practices in place or planned for managing and implementing complex projects that span multiple business lines and functional units. • 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.	the Future Oxford Partnership began the transformation from community based plan development to community based plan implementation. Since that time, several task-oriented committees continue to meet monthly to shape the objectives and goals of the plan and to coordinate the 70 actions items that will drive the plan forward. Working under the direction of the community led Future Oxford Partnership are five task oriented action committees known as Community Oxford, Economy Oxford, Reforest Oxford, Zero Waste Oxford, Smart Energy Oxford and Zero Poverty Oxford. These committees are formed by a cross-sector mix of active/passionate professionals and individuals representing the many agencies, NGOs and community groups from across our community. Within this work, not only are we advancing the implementation of the plan, through our Community Wellbeing Survey and other data analysis, the Future Oxford Partnership has established a process to determine our community baseline, our targets and ongoing monitoring program to measure outcomes in our community. • Managing the Implementation Future Oxford Partnership is a community based team of 12 citizens from various sectors and geographic centres across Oxford County with a goal of establishing the vision, pace and committee outcomes required to move forward the community sustainability plan then monitoring and reporting outcomes and progress towards the sustainability vision of Future Oxford. Each of the above noted committees are driven by community members who have an interest and level of expertise related to their respective committee outcomes. Having a vision, creating a plan and establishing committees and stakeholders all form a beginning, however our processes and thinking have now evolved to implementation and performance monitoring. Our greatest asset is the community interest and momentum it can garner. Through the political leadership of County and our eight Area Municipal Councils, Oxford has been able to resource key projects that leverage a community desire to move forward. The commitment and action to date is best demonstrated through our development of advanced buildings. Leveraging public funds to demonstrate how buildings of the future can today deliver the outcomes necessary to achieve sustainability. The Blossom Park project will serve as our flagship project, combining virtually all of the progressive elements found in our plan. However, the County and the Not-for-profit sector alone cannot be expected to innovate across all of the necessary sectors of our community. To meet the expected challenges of the next phase of this journey, Oxford County is actively working to combine the concepts of advanced building science by

creating an operational venue for a Sustainability Cluster concept.

In 2018, Oxford County and Future Oxford, working out of the 75 Graham Street Passivehouse building location, will create a social and technology innovation hub.

Progress to date includes the securing of a building, funding and architectural design. Combined with a business case for the creation of a Living Lab for the applied research and development necessary to implement and commercialize sustainability technologies, practices and innovations along with the supports to foster social enterprise that will benefit the wellbeing of our community. We anticipate an operational facility by early 2019.

Oxford County is widely recognized as an innovative municipality with experience implementing significant capital and operational projects that cross multiple public services. County council has put in place a leadership team that drives innovation in these critical services, while aligning with and supporting the sustainability aspirations of the community Future Oxford Partnership.

In 2017, the Oxford County team implemented an operating budget of $184 million and a capital investment of $73 million. By our own estimation, innovation accounted for 16% and 25% respectively of our overall investments into the Oxford community.

• Organizational strengths and potential weaknesses

Fortunately, our community has an established, multi-faceted and multi-dimensional nucleus of active citizen leaders. It has taken several years and a significant amount of effort to create the vision and committee processes required to move our community forward and we expect our participation in the Smart Cities Challenge will help us catalyse and bond our various initiatives.
The Future Oxford Partnership includes many leading innovators in our community who in turn, are supported by the political and municipal leadership that spans eight area municipalities, each with unique strengths and challenges.

Our application seeks to connect every facet of our community sustainability plan by starting from the place that our residents invest 90% of their time, and that cross every sector in our community. It will be a challenge to identify the most effective application of connected technology and data from the perspective of buildings, however we believe our approach will cross multiple services and create opportunities for every community and sector across Oxford County, extendable to all communities in Canada.

Question 9	Oxford's approach to the development of a detailed submission will:
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.	• Be overseen by the Oxford Municipal Partners Ad Hoc Committee comprising Council appointed representation from each of the eight Area Municipalities and supported by the nine Municipal Chief Administrative Officers and appropriate senior staff (in-kind); • In coordination with the Future Oxford Partnership, further engage the citizens and businesses, community stakeholders and partners of Oxford County through forum and dialogue opportunities and established community stakeholders (in-kind plus $25,000 communications material and promotions); • With the support of external expertise, undertake a detailed business case modelled from the active Passivehouse, EnerPHit and Net Zero Energy buildings in process, illustrating the capital costs (total $, $/unit and $/m3) (~ $50,000 external support); • Working with academic, private sector and LDC partners, continue to develop software applications designed to provide real-time energy data presentation. With same partners, integrate UWO derived building performance metrics into visualization tool to further illustrate opportunities for improvement toward the three measurable goals noted in Challenge statement. • Develop, issue and evaluate Request for Proposals for the construction of a minimum specified number of mixed (market and affordable) housing units in each of Oxford County's eight Area Municipalities. Construction agreements will be pending successful Smart Cities Award. (In-kind, supplemented by ~ $25,000 in external specialized support). • Detailed Proposal (written and graphical materials) documentation development (in-kind plus ~ $50,000 specialized external support) • Oxford Municipal Partners Promotional video, social media campaign highlighting the final proposal submission. This material will be used for the final Smart Cities submission as well become the focal point of an extensive community campaign promoting the proposal and the Future Oxford Community Sustainability Plan. (In-kind plus extensive specialized external support ~$50,000); • Contingency ~$50,000 to supplement as necessary each of the above and/or broaden scope as deemed appropriate.
Question 10 Describe the partners that are or will be involved in your proposal. Where partners are not yet determined, describe the process for selecting them.	The Oxford Municipal Partners Oxford is comprised of nine local government entities, the County of Oxford and eight vibrant local municipalities. Growing Strongertogether, defines us. All municipal governments endorsed the Future Oxford Community Sustainability Plan and all are engaged in this Smart Cities proposal. Future Oxford Partnership: (www.FutureOxford.ca) Future Oxford Partnership continues to serve as a citizen led

This section should include:

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

umbrella organization for the purpose of nurturing partnerships and developing the various aspects of our Future Oxford Community Sustainability Plan.

Independent Electricity System Operator (IESO)
(Sorana Ionescu)

The IESO manages Ontario's power system, including real-time generation, conservation and demand management and the ongoing development of electrical innovation across the province. Over the past two decades, the IESO has been instrumental in the transition to Smart Meters in Ontario and continues to advance third party access to Smart metering data.

In 2016, Oxford County started the process of sharing our energy baseline development and approached the IESO Smart Meter Entity group for assistance. In response, IESO created a working Council known as the Data Strategy Advisory Council to assist in the process of creating third party access to Ontario's Smart metering data, while ensuring the privacy of individuals and corporations are maintained. Oxford County joined this Council as a municipal representative and as a pilot location.

http://www.ieso.ca/sector-participants/smart-metering-entity/data-strategy-advisory-council

WalterFedy Engineers: (www.WalterFedy.com)

WalterFedy has assisted in the development of an Oxford County community report that details energy, electricity and GHG baseline profile. With their assistance, we will report on the repeatability and scalability of project outcomes.

Indwell
(Graham Cubitt, Emma Cubitt)

Oxford County's first Passivehouse project is being designed and constructed by Indwell in partnership with Oxford County. Indwell's leadership and commitment to the most vulnerable in our community will create the foundation from which we build our Smart Cities application. http://indwell.ca/

University of Western Ontario (UWO)
(Kate Huner, Michael Bauer)

UWO has a played critical in our approach to create high-performance buildings that gather performance data and utilize connected technology for predictive analysis. Our objective with UWO is to verify performance outcomes based on modelled design, and to establish reporting and continuous improvement

	outcomes.
	York University Sustainable Energy Initiative (SEI) International Renewable Energy Academy (IREA) (Dr. Jose Etcheverry) Since 2015, Dr. Jose Etcheverry of York University has advised Oxford in the development and implementation of our 100% renewable energy plan, and established the International Renewable Energy Academy (IREA) in 2016. York University SEI and IREA programs provide an important resource for public education and awareness. http://rea.info.yorku.ca/2018-program/ Ryerson University (Dr. Songnian Li) Oxford County collaboration with Ryerson University began with a GIS Solar Rooftop mapping project and extensive community participation (City of Woodstock) to help educate residents and businesses of their solar electricity generation potential. Ryerson and Oxford County continue to collaborate through the Smart Cities Canada Challenge and the Ryerson Future and Smart Cities initiative. Electric and Natural Gas Utilities serving Oxford County Union Gas, Tillsonburg Hydro, ERTH Corp and Hydro One all participate in Future Oxford committees and form a key energy partnership.
Question 11 (confidential annex) Please provide, if and only if required, confidential third party information. Information provided in this section will be exempt from the requirement to be posted online. Third party information in this section should be supplemental to the information provided elsewhere in the	Our Building Transformation project is intended to provide full access to all input models and performance outcomes. Aside from information that requires protection under Canadian Privacy law, we are not aware of any information that must be held as confidential.

application and be limited to those details that are deemed confidential. Please clearly indicate to which question(s) the information provided in this section relates.	

Other requirements

Question 12 Provide a summary of your preliminary proposal. This summary, along with your Challenge Statement, will be posted online in both official languages. You have the option of providing the summary in both official languages. If you provide it in one official language, Infrastructure Canada will translate it prior to posting online.	Our approach to a Smart Community is based on the premise that our citizens spend most of their time within, or moving between the built environment, and we can most effectively connect with our citizens by providing education and awareness, while concurrently improving the built environment in which they spend most of their lives. Starting with energy modelling and high-performance building design, we will demonstrate how an enhanced built-environment can help reduce poverty, improve health, and enable the development of key services that improve quality of life for our most vulnerable. Through our partnership with Western University, multiple data streams from three Building Transformation projects will enable us to identify building performance success and failure outcomes, leading to opportunities for improvement. This information will empower building occupants to make decisions to improve to their own comfort and affordability outcomes, while enabling economic opportunities with our community, by developing new supply chain and innovative research applications. Oxford believes a Smart City is a Sustainable City. Shaped by our community for our community, the Future Oxford Community Sustainability Plan outlines our community's vision of a vibrant, prosperous and responsible Oxford for all by achieving community sustainability throughout Oxford.
Question 13 Provide the link to the online location where you will post your responses to	www.oxfordcounty.ca/smartcities

questions 1 to 10. You may also provide your responses to any other questions. Your responses must go live on the URL provided once you have received confirmation in early to mid-May that your application is eligible.	
Question 14 In accordance with your governance structure, provide evidence 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.	Blandford Blenheim resolution Smart Cities.pdf (448.65kb) EZT resolution Smart Cities Challenge.pdf (107.7kb) Ingersoll resolution Smart Cities.pdf (32.01kb) Norwich resolution Smart Cities.pdf (480.66kb) Oxford resolution Smart Cities.pdf (29.13kb) SWOX resolution Smart Cities Challenge.pdf (277.45kb) Tillsonburg resolution support Smart Cities Challenge.pdf (283.07kb) Woodstock resolution Smart Cities Challenge.pdf (267.81kb) Zorra resolution Smart Cities challenge.pdf (215.94kb)
Question 15 Please identify the point of contact for the application.	**Contact name:** Peter M Crockett P.Eng **Contact title and affiliation:** Chief Administrative Officer **Contact phone number:** 519-539-0015 Extension (optional) 3000 **Contact email address:** pcrockett@oxfordcounty.ca
Question 16 Read the Consent and Release Form and Communications Protocol, and indicate your agreement. You can download the documents here.	I represent that I am duly authorized by the Applicant to indicate agreement with this Consent and Release Form and Communications Protocol and that I have a full understanding and comprehension of its terms. I have read and accepted the terms.

Survey questions

Question 17

For each community, provide the following information:

2017 full-time equivalents (FTEs):

- Number of total FTEs
- Percentage of total FTEs devoted to innovation

2017 operating and capital budgets:

- Total operating budget
- Percentage of total operating budget devoted to innovation
- Total capital budget
- Percentage of total capital budget devoted to innovation

Community (Blandford-Blenheim/Oxford County)

Number of total FTEs: 23.00
Percentage of total FTEs devoted to innovation: 1.00 %

Operating budget

Total operating budget: $ 2,432,980.00
Percentage of total operating budget devoted to innovation: 5.00 %

Capital budget

Total capital budget: 3,586,695.00
Percentage of total capital budget devoted to innovation: 5.00 %

Community (East Zorra-Tavistock/Oxford County)

Number of total FTEs: 17.00
Percentage of total FTEs devoted to innovation: 1.00 %

Operating budget

Total operating budget: $ 4,604,901.00
Percentage of total operating budget devoted to innovation: 5.00 %

Capital budget

Total capital budget: 2,787,875.00
Percentage of total capital budget devoted to innovation: 5.00 %

Community (Ingersoll/Oxford County)

Number of total FTEs: 87.00
Percentage of total FTEs devoted to innovation: 1.00 %

Operating budget

Total operating budget: $ 18,005,787.00
Percentage of total operating budget devoted to innovation: 5.00 %

Capital budget

Total capital budget: 5,297,000.00
Percentage of total capital budget devoted to innovation: 5.00 %

Community (Norwich/Oxford County)

Number of total FTEs: 34.00
Percentage of total FTEs devoted to innovation: 1.00 %

Operating budget

Total operating budget: $ 8,601,893.00
Percentage of total operating budget devoted to innovation: 5.00 %

Capital budget

Total capital budget: 5,493,672.00
Percentage of total capital budget devoted to innovation: 5.00 %

Community (South-West Oxford/Oxford County)

Number of total FTEs: 22.00
Percentage of total FTEs devoted to innovation: 1.00 %

Operating budget

Total operating budget: $ 6,337,244.00
Percentage of total operating budget devoted to innovation: 5.00 %

Capital budget

Total capital budget: 4,167,047.00
Percentage of total capital budget devoted to innovation: 5.00 %

Community (Tillsonburg/Oxford County)

Number of total FTEs: 130.00
Percentage of total FTEs devoted to innovation: 1.00 %

Operating budget

Total operating budget: $ 12,867,500.00
Percentage of total operating budget devoted to innovation: 5.00 %

Capital budget

Total capital budget: 1,216,000.00
Percentage of total capital budget devoted to innovation: 5.00 %

Community (Woodstock/Oxford County)

Number of total FTEs: 305.00
Percentage of total FTEs devoted to innovation: 1.00 %

Operating budget

Total operating budget: $ 76,521,096.00
Percentage of total operating budget devoted to innovation: 5.00 %

Capital budget

Total capital budget: 14,432,000.00
Percentage of total capital budget devoted to innovation: 5.00 %

Community (Zorra/Oxford County)

Number of total FTEs: 28.00
Percentage of total FTEs devoted to innovation: 1.00 %

	Operating budget **Total operating budget:** $ 7,069,961.00 **Percentage of total operating budget devoted to innovation:** 5.00 % **Capital budget** **Total capital budget:** 4,936,874.00 **Percentage of total capital budget devoted to innovation:** 5.00 %
Question 18 Please select the focus area of your preliminary proposal. If your preliminary proposal seeks to achieve outcomes that span more than one area, you may choose up to two.	**Focus area - 2 maximum** Empowerment and inclusion Healthy living and recreation
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.	**Community system/service** Arts and culture Economic development Education and training Environment Land use planning and development Public health Roads and transportation Social services Waste Other: please specify **Other** energy; renewable energy;
Question 20 Select all the technologies expected to be	**Technologies** Artificial intelligence (AI) Big data analytics Cloud computing Environmental monitoring Geospatial Health or Medical technology Internet of Things (IoT)

implicated in your preliminary proposal. There is no limit to the number of technologies you may select.	Mobile applications Open data platforms Sensors **Other**