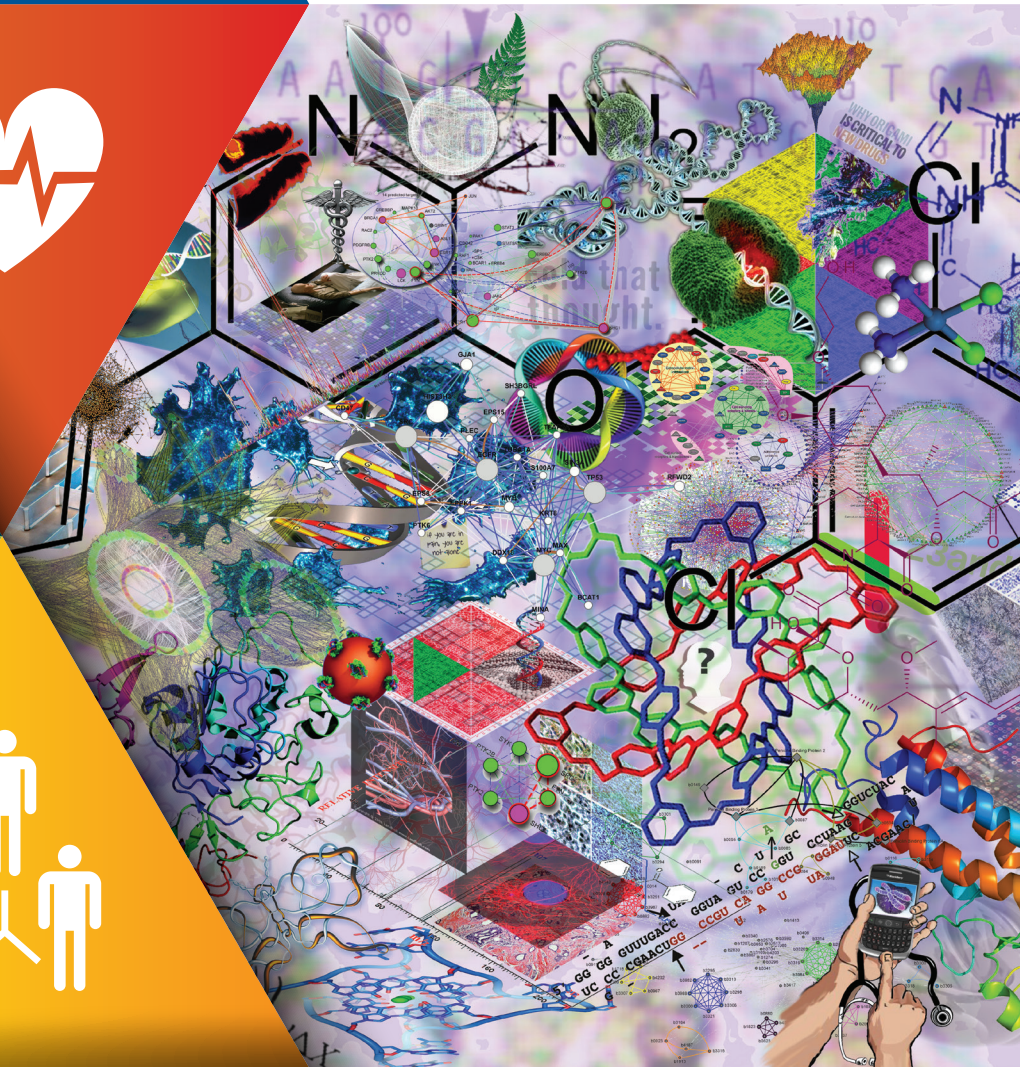
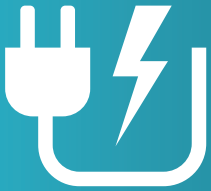


Canadian Federal Government  
Smart Cities  
Challenge



City of Vaughan  
**Application**



[vaughan.ca/SmartCity](http://vaughan.ca/SmartCity)

April 24, 2018

The Honourable Amarjeet Sohi  
Minister of Infrastructure and Communities  
Re: Smart Cities Challenge



180 Kent Street, Suite 1100  
Ottawa, Ontario K1P 0B6

Dear Minister,

The City of Vaughan is in the midst of a transformation with major city-building initiatives underway. As the City continues its evolution, my vision for Vaughan has always been clear: finding new ways to adapt to change, improving the citizen experience and enhancing the quality of life.

With that in mind, I created Vaughan's Smart City Advisory Task Force to continue to make a significant impact on every aspect of city life. As Chair of the Task Force, I am joined by an impressive group of 35 well-respected Canadian and U.S. leaders in social, economic and environmental sectors.

With that in mind, the City of Vaughan agrees with the Federal Government in its pledge to support mental health and the well-being of people as one of the most pressing challenges we face, and believe positive impacts can be accomplished through the use of technology and data.

Technology has played a vital role in our evolution. We have embraced the World Council on City Data, and in January 2016 Vaughan became the second municipality in Canada to be WCCD ISO 37120 Platinum Certified and will be the first city to pilot the new Smart Cities standard ISO 37122. Our community has also fully embraced the new Mackenzie Vaughan Hospital. When complete, it will be the first hospital in Canada to feature fully integrated "smart" technology systems and medical devices. Canada's first smart hospital!

I'm confident our "Digital Gardens" concept, highlighted in our application, will strengthen and increase social cohesion and civic participation in Vaughan. Both are key elements when discussing mental health and well-being. The positive outcomes, driven by our Smart Cities Challenge proposal, can be realized in many communities throughout Canada, with whom we share numerous commonalities.

I applaud the Federal Government for this opportunity to empower municipalities to think about the future which will accelerate and mainstream innovative programs that focus on the achievement of outcomes that address complex economic, environmental and social problems. Working to become a Smart City is a chance to encourage civic engagement, accelerate economic growth and generate efficiencies. It puts Vaughan on the leading edge of innovation to adapt to a growing community that values sustainability and creativity — a community in which everyone has their rightful opportunity to succeed and no one is left behind.

On behalf of the City of Vaughan please find enclosed the City's submission to the Federal Government's Smart Cities Challenge.

Yours sincerely,

A handwritten signature in blue ink that reads "Maurizio Bevilacqua".

Hon. Maurizio Bevilacqua, P.C.  
Mayor

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## Proposal Summary (200 words max)

The Smart Cities Challenge proposal by the City of Vaughan, in collaboration with our citizens, builds off the leadership of our Federal Government in placing mental well-being at the forefront of its agenda.

By leveraging leading-edge technology, expertise from our Mayor's Smart City Advisory Task Force and invaluable insight from engaged Vaughan residents, we will implement a Digital Gardens concept to produce scalable, positive outcomes.

Vaughan's identity is closely linked to a number of smaller communities, with which many of our residents closely identify. The Digital Garden is a collaborative sharing platform for data, ideas and solutions. Through a centrally located Vaughan LaunchPad, in our new downtown core, our proposal

seeks to use data and citizen collaboration to foster connections linking Vaughan's five communities through Local Gardens.

We are confident this will drive social cohesion and enhance a sense of belonging, while improving accessibility to City services, information and events.

The concept of the Digital Garden will change the way we live, work, play and move around, placing Vaughan citizens at the cutting edge of transformation. This will cement and cultivate a "One Vaughan" sentiment and make the City of Vaughan one of the most connected and socially cohesive cities.





## Q1: Please provide the following information on your community.

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Name of community: City of Vaughan

Population: 306,233

Province/Territory: Ontario

Indigenous community: No (Yes/No)

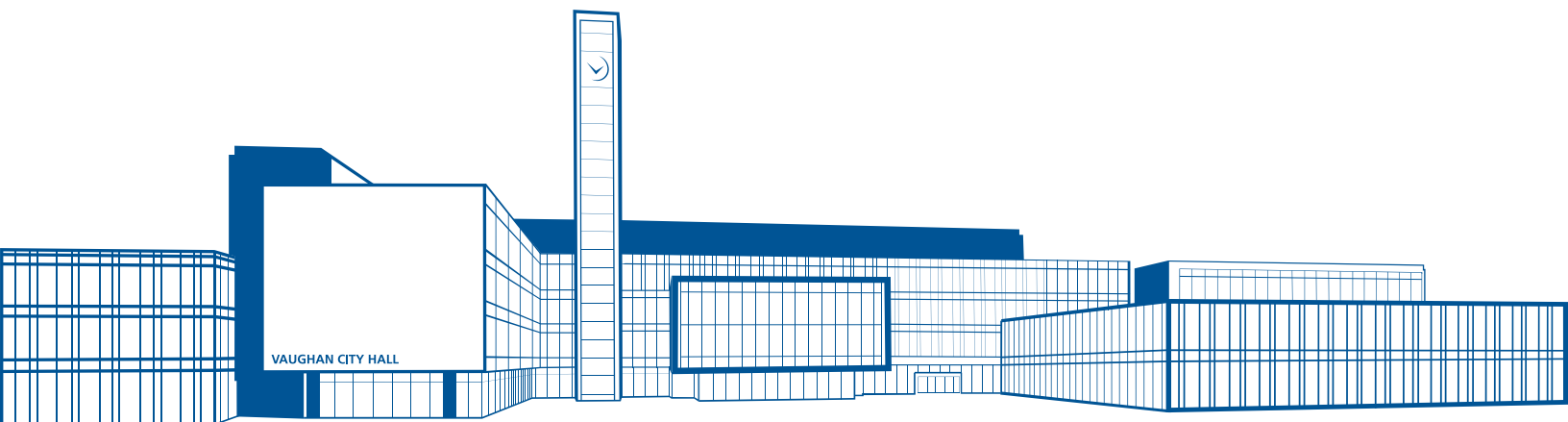
## Q2: Please select a prize category.

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\$50 million (all population sizes)

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

☐ \$5 million (population under 30,000 residents)



**Q3:** Define Challenge Statement in a single sentence that guides preliminary proposal. It should describe the outcome (or outcomes) you hope to achieve. (50 words max)

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Vaughan will continue to blend its five historic communities into “One Vaughan” with connected and engaged citizens to strengthen social cohesion and increase a sense of belonging by 10 per cent while creating new levels of accessibility to services, information and events, thereby supporting mental well-being for all Canadians.



## Q4: Describe the outcome (or outcomes) your proposal seeks to achieve by elaborating on your Challenge Statement. (2500 words max)

### Why A Smart Cities Approach

The City of Vaughan's definition of a Smart City is one that is citizen-centric with the goal of sustainability at the core, and a focus on collaboration and working together with the community to address challenges and transform traditional approaches targeting prosperity, inclusivity and resiliency to ensure long-term economic vitality. Vaughan's proposal for the Digital Garden (which will be elaborated on in question 6) supports our definition of a Smart City by using data and technology to create more connected and engaged citizens to improve social cohesion, thereby supporting mental well-being and improving quality of life of Vaughan residents. Our proposal is scalable and, if adopted by other municipalities, will have similar benefits extending to all Canadians.

The City of Vaughan's consultations, through city-wide engagements and focused workshops with stakeholders, revealed that the main challenge(s) identified by residents were feeling disconnected, a lack of social cohesion and lack of "One Vaughan" identity. Residents wanted to see a more inclusive and vibrant Vaughan. Like many cities across Canada, the City of Vaughan is geographically dispersed, and most residents stay within their local communities and neighbourhoods. Our proposal provides a platform to address these challenges.

Social cohesion is the glue that holds a community together. Fostering social cohesion means greater inclusiveness, more civic participation and creating opportunities for upward mobility. Promoting social cohesion requires strong community partners and collaboration to implement meaningful collective action and, therefore, the need for a smart city approach.

### Social Cohesion to Support Mental Well-Being of Our Citizens

Canada is a country built on immigration, which continues to be a strong driver of our economy with 75 per cent of our population growth due to immigration (Conference Board of Canada, 2017). Building social cohesion and a sense of belonging is important for the continued growth and success of Vaughan and Canada. It is important we incorporate policies that are inclusive and promote social cohesion by bringing people together and capitalizing on our diversity.

People who are more socially connected to family, friends or their community are happier, healthier and live longer, which is a building block of mental well-being. Isolation leads to a breakdown of mental health and mental well-being. Thus, by improving social cohesion through the creation of a more engaged and connected city, we are supporting the mental well-being of Vaughan residents.

Mental illness is not to be ignored. It affects one in five Canadians and nearly one-third of people in Ontario, and has a significant impact on our communities (Government of Canada and Government of Ontario). More than 6.7 million people in Canada are living with a mental health problem, and the cost of mental illness is estimated at \$51 billion per year in Canada and is expected to be \$307 billion by 2041 (Mental Health Commission of Canada, 2013). By building social cohesion at the municipal level, we are supporting and improving the mental well-being of our residents and positively impacting their quality of life. It will also improve our productivity. Mental health is the leading cause of workplace disability in Canada. In any given week, there are 500,000 people unable to work due to mental health problems, one in three workplace disability claims and 70 per

cent of disability costs are related to mental illness. In 2011, the productivity impact of mental illness was estimated to be more than \$6.4 billion and will increase to \$16 billion in 2041 (Mental Health Commission of Canada, 2013).

We will work together with partners to make Vaughan the place to be, to live, work, play and invest, where residents live longer, happier and healthier lives. We have identified the mental well-being of our citizens as a priority in achieving this, as have our Provincial and Federal counterparts. Our ultimate goal is to support and improve the mental well-being of residents in Vaughan by increasing and building social cohesion and creating a well-connected and engaged city. We will improve mental well-being by nurturing a sense of belonging and creating a more connected Vaughan — connecting people, places and information. We will build a vibrant Vaughan, focusing on cultivating arts and culture and celebrating diversity. Through an increased sense of belonging and connection to their community, citizen engagement and civic participation will measurably improve.

### Vaughan's Profile

The City of Vaughan is one of the fastest-growing municipalities in Canada with a diverse and aging population, geographically dispersed with a large commuter population, low unemployment but rising inequality and polarization, which is characteristic of many suburban cities in Canada. Vaughan celebrated its 25th anniversary as a city last year, and during this period the City experienced significant growth and transformational change. Vaughan's population reached 306,233 in 2016 — a 6.2-per-cent increase from 2011. This rapid growth has impacted our communities and the social fabric tying us together. As a city, it is important to be cognizant of this change to address pressing issues and to build social cohesion. The City of Vaughan includes five communities: Maple, Woodbridge, Thornhill, Concord and Kleinburg. Most residents (and even non-residents) identify more with these smaller communities than they do with the city as a whole.

The population of Vaughan is diverse with 46.3 per cent of our residents born outside of Canada and 105 different languages spoken. Much of the growth in the City of Vaughan can be directly attributed to

our ability to attract newcomers, which strategically positions Vaughan for stable long-term economic growth and development.

Vaughan has a very low unemployment rate of 5.8 per cent and a high labour participation rate of 68.6 per cent. Vaughan has also achieved the highest rate of self-employment when compared to other Ontario cities with a population of 250,000. The City of Vaughan is home to a large commuter population with 63 per cent travelling outside the city or region for work. The majority (84 per cent) travel to work in a private vehicle, 13 per cent use public transit, while only three per cent walk, cycle or use another mode of transportation for their commute. The City of Vaughan is also a net importer of jobs, drawing in more workers each day from across the Greater Toronto Area than the resident labour force, resulting in many people commuting into the city for work.

Most Canadian cities are dealing with an aging population. Over the past five years, there has been a 35-per-cent increase in Vaughan's senior population. The City is committed to providing aging residents with the care and services for them to live with dignity and support. Aging has been identified as a priority by our Mayor and Council, and the needs of the aging population are taken into consideration in the City of Vaughan's Seniors Strategy, Active Together Master Plan, Transportation Master Plan and other City initiatives and strategies. In fact, the World Council on City Data (WCCD) has identified that Vaughan residents live longer than residents of many international cities in the WCCD database. Vaughan has a life expectancy of 86, which is higher than Barcelona, Melbourne, London, Shanghai and Dubai.

The poverty rate for the City of Vaughan in 2015 was 8.8 per cent, based on the Statistics Canada low-income measure after tax. However, the Vaughan Community Well-being Report indicates that residents living on low income in York Region grew almost by 61 per cent from 2000 and 2012. Affordability is also a serious issue in Vaughan, where the cost of single detached homes increased by 87 per cent and the wait list for social housing increased by 63 per cent during this period. Furthermore, research by the United Way shows relative inequality in York Region has increased by 63 per cent from 1970 to 2015 and relative increase in polarization by 98 per cent within this same timeframe. Rising inequality and polarization often lead to undesirable social outcomes and tensions.



## A Connected and Engaged City to Build Social Cohesion

A socially cohesive society is one that works toward the well-being of all its members, fights exclusion and marginalization, creates a sense of belonging, promotes trust and offers its members the opportunity of upward mobility. Mayor Bevilacqua often emphasizes that Vaughan citizens are the City's most important assets because they embody the spirit of this city. Vaughan citizens have a kindness and generosity that is real, genuine and infectious, and as we continue to build Vaughan, it is vital we keep the human connection in mind. Mayor Bevilacqua views the Smart City approach as an opportunity to encourage greater civic engagement, accelerate economic growth and generate government efficiencies by working together with our community.

Stakeholders during the consultations repeatedly stated that they would like to see a more vibrant Vaughan with more community events and festivals and a focus on arts and culture; a place where people stay instead of leave. Vaughan citizens wanted a more inclusive Vaughan, more activities and programming for seniors and youth. Residents also talked about a lack of Vaughan identity. Most residents identify with their own local communities instead of Vaughan. Residents wanted the City to focus on improving quality of life with an emphasis on health and well-being. We listened and believe this can be achieved by focusing on building social cohesion.

The Harvard University longitudinal study on human development found relationships have a direct correlation to happiness. Research has shown loneliness to have detrimental health implications and is associated with higher rates of mortality and lower life satisfaction (Mental Health Foundation). Communities are changing from traditional neighbourhoods, where everyone knows each other, to communities in which people barely know their neighbours. This change can be attributed to a number of modern factors, including longer working hours, differing family structures, people living farther apart and our reliance on social media and technology to stay connected (Mental Health Foundation).

During the consultations, we heard about the stresses of the "sandwich generation" who are supporting and providing care for both their children and their

parents. More stress is placed on this demographic, who often are the ones working and supporting their families than ever before. Residents shared their experiences of being part of this "sandwich generation," which revealed to us, first-hand, the impact to their well-being and productivity. One resident told us her story about the stresses of looking after her mother and her young children. She is an entrepreneur, who often spends countless hours commuting to Waterloo or Toronto to work because of the lack of incubators in Vaughan. The pressures of her Vaughan-based home life will often create conflict with her commute-based work life. The result is an overall decrease in her productivity and well-being. She explained the frustration of being stuck in traffic, missing a day of work, all compounded by having to deal with an already stressful situation. This is an all-too-familiar story for 28 per cent (in 2012) of Canadians who are part of this "sandwich generation," balancing the demands of caregiving and raising children, most often impacted women (54 per cent), those between the ages of 35 and 44 (37 per cent) (Statistics Canada, GSS Cycle 26, 2012). The General Social Survey (GSS) also revealed caregivers reported feeling worried or anxious, 28 per cent of respondents found providing care somewhat or very stressful and 19 per cent indicated their physical and emotional health suffered in the last 12 months as a result.

Greater diversity increases the need for cultural, ethnic or religious accommodation and impacts social cohesion. A study completed by Harvard Political Scientist Robert Putnam found that residents in more diverse communities reported having less trust in their neighbours, media, local government, fewer people voted, fewer people gave to charity, fewer people worked on community projects and had fewer friends. The study found that people in diverse communities were less happy overall and less satisfied with their lives (Putnam, 2007). The social cohesion of our community is made up of our shared norms and values. Diversity can impact this and we must ensure we accommodate to the needs of our community. It's important we capitalize on our diversity and to tell stories of residents in our community to build social cohesion. Evidence increasingly shows that social cohesion is critical for societies to prosper economically and for development to be sustainable (WHO, 2008). Research shows that cities with large immigrant populations tend to have

higher productivity and innovation. Diversity leads to cross fertilization of ideas that contribute to creativity and innovation, and also contributes to global connections, which is key to economic development (Spoonley, 2014). The City of Vaughan will capitalize on its diversity and provide a platform for innovation.

## Measures

Social capital, which is often used as a measure for social cohesion, is not currently being tracked. However, baseline data on sense of belonging, voter participation and civic participation are available. The proportion of residents who reported a somewhat strong or very strong sense of community belonging in York Region from 2013 to 2014 is 66 per cent, which is below the provincial average of 68 per cent (Canadian Community Health Survey, 2007–2014). Voter participation in Vaughan for the last municipal election in 2014 was low at 30.3 per cent. The national average was 43.12 per cent. Voter participation is a good proxy indicator for civic engagement and how active residents are with municipal issues. Also, a 2014 survey indicated 57 per cent of respondents said they were unlikely to participate in town hall meetings, 34 per cent were somewhat likely to participate and only 9 per cent were very likely to participate.

With regards to civic participation, our citizen survey reveals that fewer people are interacting or accessing city services in Vaughan than the national norm. The survey revealed the following:

- 42 per cent of residents indicated they had contact with City of Vaughan staff or an employee in the past 12 months (national average is 52 per cent).
- 45 per cent accessed or used a service/program provided by the City and 39 per cent did not have any contact.
- 62 per cent were very/somewhat aware of the Vaughan Metropolitan Centre, our new downtown, and 38 per cent were not aware, compared to 90 per cent who were very/somewhat aware of the new subway line connecting Vaughan to downtown Toronto.

Currently, the City of Vaughan hosts 21 “City-led” events throughout the year and supports 21 “community-led” events.

To measure progress and success of our proposal, we will measure sense of belonging, social capital, number of Vaughan-sponsored community events and citizen participation in community events.

The City will start measuring sense of belonging and social capital through our citizen survey, which is undertaken by Ipsos Reid and updated every two years. This will give the City an ongoing data set that can be reviewed to a baseline. We will use data from our proposed projects to measure Vaughan-sponsored events and citizen participation in events. We will also have project-specific metrics, which will be outlined in Question 6.

**Q5:** 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. (1500 words max)

#### **Citizen Engagement and Outreach**

The City of Vaughan's approach to stakeholder consultations for the Smart Cities Challenge has been inclusive and engaging. The City created an engagement and outreach strategy with a full feedback loop, consisting of city-wide engagement, focused workshops, input and feedback from the Mayor's Smart City Advisory Task Force and citizen verification to inform the Challenge and ensure citizens' priorities are met.

The City of Vaughan is made up of diverse groups of cultural backgrounds with diverse interests. The citizen engagement approach we took for the Smart Cities Challenge was to create a future for Vaughan shaped by residents, as well as giving citizens a voice in the definition of issues and problems. By doing so, we sought to provide an opportunity to our residents to develop ideas and solutions. The City of Vaughan reached out to various groups and organizations to provide a well-rounded view of the needs of Vaughan citizens and businesses. Staff engaged with community stakeholders, businesses, non-profit organizations and service providers whose goal is to improve quality of life and well-being of residents.

#### **Citizen Engagement, Survey and Workshops Summary**

The City of Vaughan took a multi-channel approach to citizen engagement and feedback, including the creation and involvement of the Hon. Mayor Maurizio Bevilacqua's Smart City Advisory Task Force, seven two-hour workshop/focus group meetings, a unique Smart Cities art curated event and discussion, and a series of broadly based citizen outreach and engagement initiatives.

The Smart City Advisory Task Force is chaired by Mayor Bevilacqua and comprised of 35 leading Canadian and U.S. leaders in social, economic and environmental subjects of future Smart City importance. A majority, 69 per cent of the Task Force members, are C-Suite-level individuals directly responsible for effecting change within their organization. The Task Force is facilitated by William Hutchison, Chair, i-CANADA Alliance and Distinguished Research Fellow at the Munk School, University of Toronto, with more than 20 years' experience in building Smart Cities. The workshop/focus groups were each comprised of approximately 20 experts in the subject, and output from the workshops and feedback from the citizen surveys and related interviews provided input to the Task Force. Task Force members then collaboratively used their senior-level experience to provide input and feedback for Vaughan's Smart Cities Challenge application.

## Citizen Engagement Details

The broadly based citizen surveys asked residents in which area the City of Vaughan should focus for the Challenge and encouraged them to share their big ideas. To ensure our approach is inclusive, we reached out to a wide segment of our residents. This included traditional city-wide website outreach through communication to citizens, business contacts established with the Economic Development and Culture Services department, not-for-profit organizations, such as United Way of York Region, York Entrepreneurship Development Institute, Vaughan's future hospital, local post-secondary educational institutions (York University, University of Toronto) and outreach through the Task Force member networks.

The City reached out to residents by traditional email blast through our networks including: Vaughan Business Enterprise Centre (2,700); Vaughan Chamber of Commerce (900); City of Vaughan internal staff (City of Vaughan Social Media Channels: Twitter – 12,843, Facebook – 4,722, Instagram – 2,519).

Vaughan Councillors also reached out to their respective constituents with the survey emailed to 8,000 residents and businesses. Each Councillor was also interviewed to ensure our identified Challenge reflected the needs of their constituents.

Vaughan is a family oriented city so City staff attended Winterfest for additional input from residents. As part of the City of Vaughan's corporate partnership with Vaughan Public Libraries, we asked them to help administer the survey to reach a wider segment of the Vaughan population. The libraries are an important partner for the City of Vaughan, helping to bridge the digital divide and ensuring Vaughan residents have access to digital capabilities and education so they're not left behind.

## Focused Workshops

The digital transformation tool for decision-making processes, PowerNoodle, was used during the workshops in order to facilitate meaningful conversations with our stakeholders. To obtain the expertise of a wide spectrum of experts, the City held six focused workshops and a community engagement workshop, which were open to all residents. The themes included: millennials, arts and culture, inclusion and empowerment, environmental sustainability, industry and innovation, health and wellness. The workshops provided an opportunity to share with participants the Smart Cities efforts that we are undertaking in the City of Vaughan and information about our Smart Cities Challenge. The City engaged in meaningful conversations about what mattered most to residents and challenges the community faces. We utilized PowerNoodle by organizing and prioritizing ideas, and enabled participants to comment and provide input on each other's feedback.

## smARTcities: Exploring the Digital Frontier

Our Smart City art exhibit offered a unique engagement component to Vaughan residents. Artist Ron Wild integrates Vaughan-centric imagery into a symbolic visual vocabulary to envision the transformative role technology and IoT can play. The City used art as a medium to educate and facilitate conversations with residents on Smart Cities. As part of this exhibit, we hosted an engaging discussion with an expert panel consisting of the artist, Ron Wild, Oren Berkovich, CEO, SingularityU Canada Summit, Lilian Radovac, Urbanist Professor, University of Toronto and Vaughan CIO Frank Di Palma and members of the audience about art, innovation and city-building, filtered through the context of Smart City transformation. As part of this process, we are encouraging Vaughan residents to submit digital interpretations illustrating the transformative potential for Smart City technologies and all submissions will be integrated into an original MEGAsmARTcities digital map remixed and composed by Ron Wild.



## Previous Engagements

The City also took into consideration previous stakeholder engagements and consultations that formed key City of Vaughan strategies. The findings and results were reviewed from the following: Digital Strategy 2.0, Citizen Satisfaction Survey, Service Vaughan Strategy, City of Vaughan Strategic Plan: Vision 2020, Green Directions Vaughan, Active Together Master Plan, VMC Cultural Framework and Public Art Plan and Creative Together: A Cultural Plan for the City of Vaughan. Each of these strategies and plans included extensive consultations with residents, staff and other key stakeholders.

## What We Heard – Results from the Engagement Process

Through extensive consultation, we asked residents what they thought were the main challenges residents in Vaughan faced and the results were consistent with previous City and community engagements: 1) Residents don't identify with Vaughan, but rather with their local communities and, 2) A desire by residents for more events. This is consistent between previous engagements and the consultations that took place for the Smart Cities Challenge.

The issues of inclusive communities and accessibility came up often. The need for more services for Vaughan's aging and youth population were emphasized. The concern of Vaughan's hidden poverty came up, the pressures of keeping up with everyone and the issues with affordability. Lack of housing affordability was a main concern for millennials and, as a result, young professionals are often moving out of Vaughan. Residents also wanted a vibrant city with an emphasis on arts and culture with more cafés and events.

Traffic congestion and lack of transit options were often top-of-mind issues in previous consultations. Vaughan is challenged to address the first-last mile gap because of its typical suburban development process. While two subway stations were recently opened in the City, including a new terminal station at the Vaughan Metropolitan Centre, it is

still a challenge to access these higher-order transit connections. Furthermore, outside of these stations, the major communities in Vaughan are not well connected by roads or transit due to geographic constraints and land use patterns.

## Continued and Ongoing Stakeholder Consultation Process

The City will continue to work with our community to help us design the details of the Digital Garden, our Smart Cities Challenge proposal. We will continue the engagement process with consultations throughout the proposal stage and the development of the design and project implementation strategy. Vaughan residents will have an opportunity to shape and provide input to the proposal to address their needs. The City will also work with the community in identifying piloting opportunities.

Furthermore, the City of Vaughan will continue to engage our residents as part of our ongoing Smart City efforts through the Mayor's Smart City Task Force. In addition to gathering input from residents on the City of Vaughan's Smart Cities Challenge proposal, the continued engagement will also help frame Vaughan's Smart City Strategy and the priorities for the new Term of Council. To ensure we take in all the needs of our residents and communities, we will create an Equity and Inclusion Advisory Committee to advise the Mayor and provide input to City of Vaughan initiatives. An Equity and Inclusion Advisory Committee will consist of members from a cross-section of communities, including faith groups that represent the diversity of Vaughan residents. The Equity and Inclusion Advisory Committee will also provide advice and input into our Smart Cities Challenge proposal.

## Q6: Describe your preliminary proposal and its activities or projects. (2500 words max)

### Our Vision

We are a city that is committed to our citizens and making sure no one is left behind. This means our policies and programs are inclusive and enable every resident an equal opportunity to participate. We are committed to improving the daily lives of our residents, making Vaughan one of the most livable cities in Canada with a quality of life that is second to none.

Our visionary mayor is committed to “sensory-based planning” to enhance the human experience as part of city living. It is about how people feel living in a city and what they can see and touch. This concept was used in developing the VMC to include experiential elements people can see and feel to immediately create a sense of belonging. We will use data and technology to create a “One Vaughan” identity by connecting residents and encouraging participation in events to increase community sense of belonging and social cohesion.

### Innovative Community Collaboration Through a Digital Garden

Our proposal calls for the creation of a Digital Garden; an online platform to build social cohesion and create a more connected and engaged city through the Vaughan LaunchPad as the main community hub and the five Local Gardens representing the community hotspots. Much like the concept of community gardens, the Digital Garden is a collaborative community initiative, with which citizens come together to plant fruits and vegetables for the community. However, in this case, data and ideas can be used by the City and the community to generate solutions. Much like community gardens, the Digital Garden will be a platform for sharing knowledge and learning,

getting residents engaged and cultivating a culture of sharing, serving the greater community and building a sense of community belonging. The concept of the Digital Garden will be an online platform, however, the LaunchPad will be a physical space where people come together to work and share ideas. It will be the new meeting point for Vaughan residents. The Digital Garden will cement and cultivate a “One Vaughan” sentiment and make Vaughan one of the most connected and socially cohesive cities.

### Vaughan LaunchPad

A collaborative co-working, co-learning and interactive space in the Vaughan Metropolitan Centre hosted by the City of Vaughan.

The Vaughan LaunchPad will provide the following:

- Collaborative co-working and incubator space for local entrepreneurs and businesses;
- Co-learning space with online classroom capabilities and Singularity University Campus;
- Smart City Expo for citizens to learn about new emerging technologies and city solutions from around the world;
- City engagement space, an interactive place for city staff to discuss city challenges and issues with citizens using data collected from the Gardens (community hotspots) and to receive feedback and input on specific strategies and issues, and;
- Test City Headquarters, testbed for piloting city and business solutions.

## Local Gardens

The Local Gardens will be community hotspots, similar to Smart Kiosks, and will be the local community hub for the Digital Garden. Each Local Garden will be designed with, and by, the community to showcase and enhance the local communities' heritage and culture.

The Local Gardens will provide the following services:

- Wayfinding, directing citizens to the most convenient route and transit options, and ability to access shared mobility options;
- Social media interactions, have up-to-date information on events and what's happening in the local community and within Vaughan;
- Administrative city procedures, such as online payments and digital deputations;
- One-stop shop for government services, including Service Ontario offerings;
- Public WiFi for residents and tourists;
- Ability to broadcast events;
- IoT sensors to gather data on traffic, parking, air quality, attendance at events, etc.;
- Comprehensive listing of points of interest, events, nature and trail system, recreational activities and programming, and;
- Mini Gardens, which are digital interactive stations that will be placed in community centres, long-term living facilities, seniors' residences and the Mackenzie Vaughan Hospital that provide services, WiFi and screens for broadcasted events.

The Digital Garden proposal is innovative and collaborative. It will change the way we work, learn, move around the city, engage and interact with citizens and, most importantly, the way we play and celebrate to create a more socially cohesive Vaughan by engaging and connecting residents.

## Changing the Way We Engage and Interact with Citizens

Through the Digital Garden concept, city services will become more accessible by making tax and parking payments and other city services, as well as Service Ontario, available through Local Gardens. Further innovation will give residents the ability to use the Local Garden platform to make online deputations to Council, making it more accessible for those who cannot attend meetings in person to have their voices heard.

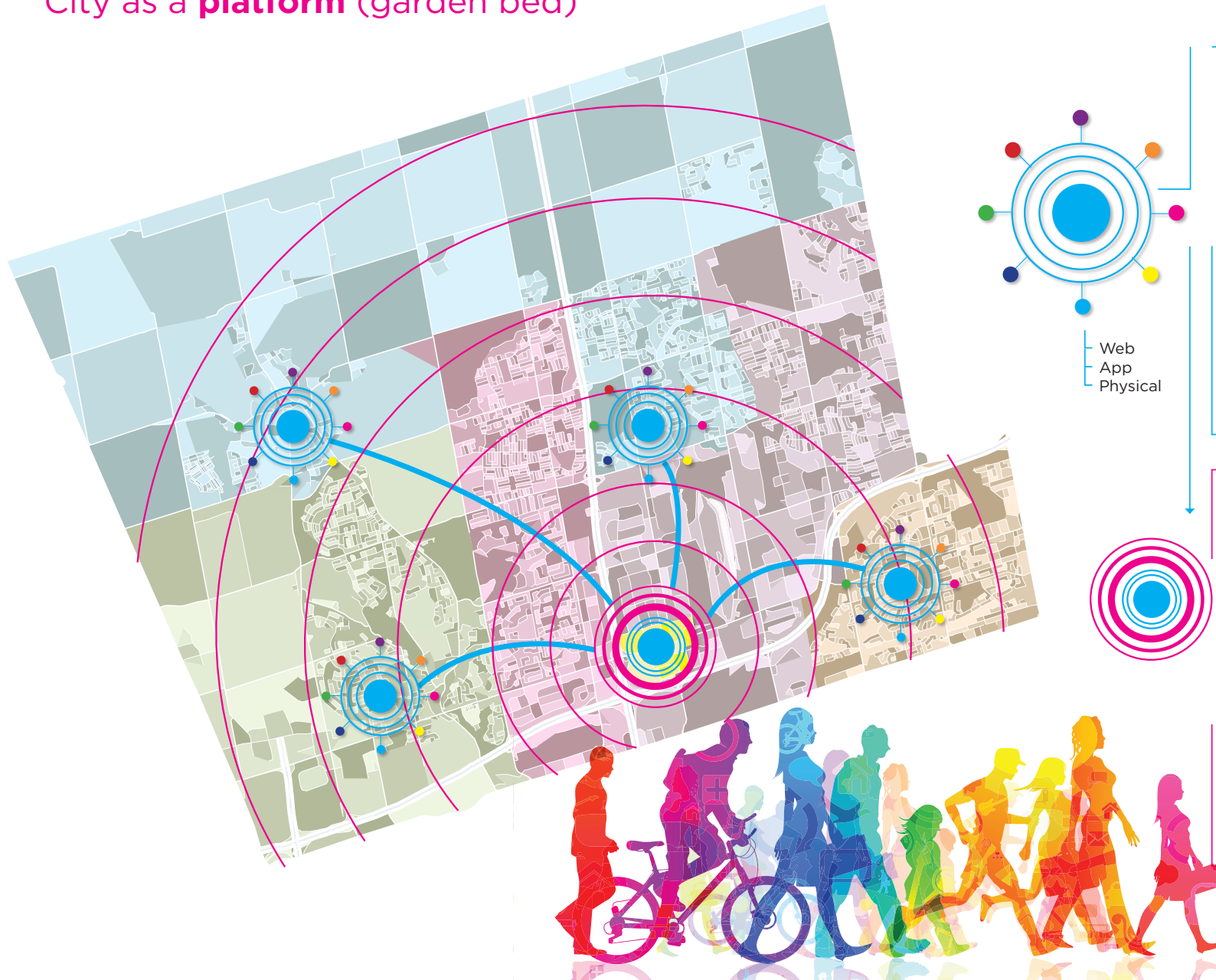
The Local Gardens, through IoT sensors, will gather data on traffic, parking, air quality, temperature and other information to help inform dialogues and solutions with residents. Improved, more accurate and open data increases the social capital between city staff and citizens by providing evidence of the actual issues the community is facing, enabling conversations based on facts and solutions that are targeted.

Vaughan's commitment to open data means we can have more engaging and meaningful dialogues with citizens on top-of-mind city issues, such as traffic congestion and air quality. For example, historical, fine-grained origin-destination and travel time information allows for the analysis, identification and testing of solutions that were not previously possible. Having this data available through the Digital Garden will provide an opportunity for City staff to use the LaunchPad as a space to interact and engage with citizens, using open data evidence for solving challenges and proposing solutions. City staff can use data to engage in dialogues with residents to identify specific community challenges and needs, work with residents to implement solutions and use data to have dialogues after the testing to show residents the results and impacts.

The City can use improved data collection and synthesis to provide revolutionary services. An advanced traveller information app can inform citizens of traffic incidents and provide viable alternative travel options, such as shared mobility/ micro-transit vehicles or locations of the nearest dockless bikeshare bicycles. Solutions such as these will improve citizen trust in City services, and increase accessibility and transportation

# Connecting our Community through **Digital Gardens**

City as a **platform** (garden bed)



## Community Local Gardens

- Wayfinding, directing citizens to the most convenient route and transit options, and ability to access shared mobility options
- Social media interactions, have up-to-date information on events and what's happening in the local community and within Vaughan
- Administrative City procedures such as online payments and digital depositions
- Public WiFi for residents and tourists
- Ability to broadcast events
- IoT sensors to gather data on traffic, parking, air quality, etc.
- Comprehensive listing of points of interest, events, nature and trail system, recreational activities and programming

## The Vaughan LaunchPad

- Collaborative co-working and incubator space for local entrepreneurs and businesses
- Co-learning space with online classroom capabilities and Singularity University Campus
- Smart City Expo for citizens to learn about new emerging technologies and City solutions from around the world
- City engagement space, an interactive place for City staff to discuss city challenges and issues with citizens using data collected from the Local Gardens (community hotspots), and to get feedback and input on specific strategies and issues
- Test City Headquarters, testbed for piloting City and business solutions





alternatives for those who have limited options, such as children, the elderly or those with medical conditions. It will reduce the stress and anxiety caused by congestion for all.

The Vaughan LaunchPad will provide an environment and testbed for piloting City and business solutions, and will be the headquarters for Vaughan's already-approved Test City project.

The LaunchPad, through the Test City project, will also work with businesses to test and pilot their products and services in Vaughan. Test City will provide advice and input to help businesses scale their products and services. This is especially important for businesses interested in entering the Canadian market for the first time. The LaunchPad will be a testbed for new technologies and innovative solutions.

The LaunchPad will also host a Smart City Expo space, an innovative exhibit and simulation centre in which citizens can learn about the various smart cities technologies and solutions being implemented around the world. The Smart City Expo presents another opportunity for the City to use data to inform dialogues with citizens.

### **Celebrating Diversity and Vibrancy Through Arts and Culture**

The City of Vaughan is extremely diverse as almost half our residents are foreign born. Vaughan is also a city rich in culture. The Digital Garden will be an opportunity for the City, and the various communities, to work together to celebrate diversity. We will work collaboratively to increase and promote the number of cultural and family events that bring the community together so citizens will be more connected and engaged. The Local Gardens will disseminate information on events and the best way to get to these events with convenient transit and shared mobility options. Residents will know what's happening in their community and get the most up-to-date information. The Digital Garden will also provide a platform and space for the community to come together and organize and promote their own community events.

Not only will the Local Gardens disseminate information on events within Vaughan, but it can broadcast events, too. This will enable residents to participate online via apps, and we will also distribute mini Gardens to various community

centres, long-term care facilities, seniors' residences and the new Mackenzie Vaughan Hospital to recreate an event and make those who cannot physically attend an event feel included.

### **Promoting Sharing Culture**

The LaunchPad will be a co-working and an incubator space for entrepreneurs, self-employed, start-ups and remote workers. The City of Vaughan, through its Economic Development Department, will host the LaunchPad space where thought leaders and entrepreneurs come together to share and discuss challenges we are facing in our community to come up with citizen-centric solutions.

The LaunchPad will be the first incubator space in Vaughan. The number of entrepreneurs and self-employed residents in Vaughan has increased to 15.2 per cent of Vaughan's labour force. Many of these entrepreneurs currently travel to Toronto and Waterloo to access incubator spaces, and this will alleviate stresses of having to commute, help with congestion and encourage more innovation and entrepreneurs to move to Vaughan.

The LaunchPad will also change the way we learn by providing online classroom capabilities and online university options through Singularity University. The LaunchPad will host a series of online workshops and training programs for Vaughan residents interested in updating their skills. The online classroom can broadcast world-class international lectures to residents. This will enable our citizens to update their skills and continue to learn with high-quality educational opportunities without having to travel and spend a lot of money.

The sharing culture will change the way we move and connect with each other in Vaughan. Traffic congestion is a top-of-mind issue for residents, and there are limited convenient transit options, similar to many suburban communities. The City of Vaughan is currently considering shared mobility options and this will change the way residents attend events. Shared mobility is a collection of services, such as on-demand carpooled ride-sharing or micro-transit,

that makes better use of existing infrastructure and ultimately reduces road congestion. These services will also significantly improve accessibility for Vaughan's vulnerable populations, including those who require medical assistance and the elderly, reducing the isolation for those without access to a private vehicle.

The LaunchPad will also have an important international collaboration dimension as a participating city in the U.S.-based Smart Gigabit Cities "SGC" Cluster. The SGC Cluster includes 20 U.S. mid- and smaller-sized cities, along with the City of Adelaide, Australia. Created by U.S. Ignite, a not-for-profit agency initiated by the Obama White House to stimulate innovation, the SGC project was one of the U.S. government's Smart Cities Challenge initiatives in 2015. Cities in the cluster each have a very high bandwidth innovation district for start-ups, and each city commits to creating two new Smart City Apps and sharing them with the other cities in the Cluster, thereby creating and sharing a total of 40 new Smart City Apps. Vaughan will become a full participant using high-bandwidth, low-latency technology called SAVI that is seamlessly compatible with the U.S. technology. Participating in this cluster will provide a unique opportunity for start-ups in the Vaughan LaunchPad to collaborate with start-ups in the 20 U.S. cities. It will also facilitate collaboration and engagement between Vaughan's socially focused organizations, to share ideas and easily arrange online high-bandwidth collaboration and discussions using the gigabit networks in each participating city.

### **Measuring Progress**

We will use a number of project-specific indicators to measure progress and these will be identified during the proposal development stage. For example, the indicators will track progress on the number of organizations and businesses registered to the Digital Garden, the number of events listed and participation, number of datasets and ideas generated just to name a few.

## Q7: Describe the ways in which your preliminary proposal supports your community's medium and long-term goals, strategies, and plans. (500 words max)

Vaughan's proposal, the Digital Garden, will create a more connected and engaged city, which aligns perfectly with the City's vision to be the city of choice. A city that promotes diversity, innovation and opportunity for all citizens, fostering a vibrant community life that is inclusive, progressive, environmentally responsible and sustainable.

The Digital Garden is very citizen-centric and will be designed based on the needs of residents. Our proposal supports and enhances the goals outlined in the City of Vaughan's Term of Council Priorities and Strategy Plan Vision for 2020. The citizen-focused Digital Garden will support and advance the Service Excellence framework and its mission of "Citizens First Through Service Excellence." Our proposal and consultations, completed under the Smart Cities Challenge, will provide insight and inform the next Term of Council Priorities.

Our proposal aligns and supports Vaughan's digital transformation and the four focus areas of the Digital Strategy:

- 1.** An engaged community – citizens will be more aware and informed of what's happening in their community and providing the resources for citizens to be fully engaged in the City.
- 2.** Citizens can do business with the City through digital channels – the Local Gardens will provide digital stations for citizens to do business with the City.
- 3.** Be an open and transparent government – all data gathered will be open and used to facilitate dialogues with citizens; we will also provide free WiFi.

- 4.** Internal transformation and modernize city processes – changing the way we work and interact and engage with citizens and adopting a culture of data.

As part of Vaughan's Digital Transformation, Mayor Bevilacqua convened a 35-member Smart City Advisory Task Force in December 2017 to help identify priority needs to inform a Smart City Strategy for Vaughan. Our proposal for this Challenge will complement and support the efforts being undertaken by the Task Force, and the findings from the Challenge will help inform the Task Force's recommendation report to Council. This will ensure our Challenge proposal aligns with the broader framework for Vaughan's Smart City Strategy.

Our proposal to build social cohesion by fostering a vibrant community life and celebrating diversity is an important priority for the Government of Canada. Building social cohesion to support mental well-being aligns with Government of Ontario and Government of Canada commitments to support mental health. Vaughan's proposal also supports the Government of Ontario's comprehensive mental health and addictions strategy, Open Minds, Healthy Minds, and the goals of improving mental health and well-being for all Ontarians and to create healthy, resilient, inclusive communities. At the federal level, our proposal will support the Mental Health Commission of Canada's (MHCC) ongoing national focus for mental health issues and to provide better services for the country's diverse population for improving the mental health system. Our proposal also aligns with the larger community's efforts to support mental health, including Bell Canada's Let's Talk campaign, focusing on changing the conversation on mental health with a total of 138,383,995 interactions thus far and \$93.4 million donated to mental health initiatives.

## Q8: Describe your community's readiness and ability to successfully implement your proposal. (1000 words max)

Traditionally, many cities have adopted a siloed approach to problem-solving and delivering solutions. By comparison, a Smart City is one in which silos are broken down and focus is placed on innovative collaboration that cuts across city departments, where levels of government work with both the private, public and non-profit sectors. Data is also at the core of a Smart City approach, using data analytics for better informed decision-making.

Vaughan is currently undertaking a major transformation, which is being led by Mayor Bevilacqua and our City Council. Under the leadership of our forward-looking mayor, we have started Vaughan's digital transformation through our Digital Strategy and Vaughan's Service Excellence Journey through our Service Vaughan Strategy. In addition to these two key strategies, we also have many new initiatives that will support and complement our Digital Garden proposal, including our new downtown, the newly developed Vaughan Metropolitan Centre, which includes a new subway line connecting to downtown Toronto and Vaughan's new hospital — Canada's first smart hospital. Our mayor also created a Smart City Advisory Task Force of leading experts to provide recommendations on priorities to help drive forward Vaughan's Smart City initiatives.

### Vaughan's Digital Transformation

Vaughan is at the onset of its digital transformation, developing a prototype for open data, expanding online service delivery and evaluating and investing in new digital technologies to enhance productivity and support key public initiatives. As part of this digital transformation, the City of Vaughan is partnering with Bell Canada to provide next-generation broadband fibre connections to homes

and businesses with the fastest Internet technology. This \$170-million investment over the next three years will enable Vaughan to become a world-class leading Smart City by providing the necessary infrastructure in place for our Digital Garden proposal and other Smart City applications.

The City of Vaughan's Digital Strategy defines how Vaughan will interact with citizens digitally, including communications, access to data and content, public connectivity, digital literacy and mobile applications. At the core of Vaughan's digital transformation is understanding our staff and citizens, their needs and motivations, and implementing change within the City to design more human services. Through this digital transformation, we are adopting a new approach and way of thinking about services and service design, challenging the status quo, encouraging collaboration across departments to break down silos and seek out solutions. This cultural shift within the City demonstrates that we are ready for a Smart City approach and this supports our Digital Garden proposal.

A Smart City is one that focuses on using data to identify challenges in order to implement targeted solutions to improve and enhance quality of life for its citizens. Our mayor is strongly committed to open data and to building a culture of data within the City. Mayor Bevilacqua has been part of the World Council on City Data (WCCD) leadership since 2011, helping to spearhead and lead the efforts locally and internationally on open data and using data for informed decision-making. As a result of this effort, the City of Vaughan has engaged in international benchmarking and learning from other key international cities since 2011. International benchmarking promotes economic development and enables us to identify common management issues and themes to learn and share best practices with cities globally.



The WCCD's Global City Registry for ISO 37120 Sustainable Development of Communities - Indicators for City Services and Quality of Life is the first international standard for cities on open data, and the City of Vaughan has been a Platinum certified city since 2015, demonstrating our commitment to global efforts for standardized open data and confidence in our City data.

### **Vaughan's Service Excellence Journey**

The Service Vaughan Strategy, our Service Excellence framework, has defined the guiding principles for the City of Vaughan's transformation initiatives. The Service Excellence Strategy Map aligns our people, processes and technology with the goals of improving citizen experience, operational performance and staff engagement. Enhancing civic pride through a consistent city-wide approach to citizen engagement is a council priority. Improving citizen experience includes citizens engaged in decision-making and consistent service delivery, including improvements through technology for end-to-end citizen-centred services. This will define the citizen experience for Vaughan residents and businesses as they interact with the City. This includes how citizens receive information, complete transactions, initiate and resolve service requests, receive service status communications, and provide feedback to the City.

Building a downtown is a multi-generational and multi-disciplinary project that requires the participation of private- and public-sector partners, citizens and community leaders. The new Vaughan downtown, the Vaughan Metropolitan Centre (VMC), is an ambitious and complex program of projects that involves multi-stakeholders and is multi-dimensional in scope, leveraging the \$1.2-billion investment in transit infrastructure to extend the subway line to Vaughan and provide regional connections through a new bus rapid transit corridor. Building a shared public realm, animating places and inviting people to engage and participate in activities in the City's new downtown is critical to the VMC's development. Our Digital Garden proposal supports this.

The City of Vaughan has been working across departments and with multiple stakeholders from public, private and non-profit partners including the Province of Ontario, Toronto York Spadina Subway Extension (TTC), York Region, York Region Rapid Transit Corporation, Toronto and Region Conservation Authority, architects, planners, consultants, community groups and numerous landowners to successfully co-ordinate the streamlined planning, design and construction of key infrastructure projects and development proposals within the VMC Implementation Plan.

### **Mackenzie Vaughan Hospital – Canada's First Smart Hospital**

The new hospital, currently under construction in Vaughan, is a \$1.6-billion initiative and will employ more than 1,800 full-time hospital staff. Vaughan, in collaboration with York Region and our community, are bringing modern, accessible, leading-edge health care to our residents. Vaughan's hospital will be the first hospital in Canada to feature fully integrated smart technology systems and medical devices that can speak directly to one another to maximize patient care.

**Q9:** 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)

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The City of Vaughan will use the \$250,000 grant for continued community engagement, project management, feasibility study and piloting.

**Citizen Engagement and Outreach**

The City of Vaughan will be taking on a community collaborative approach to designing the full proposal for the Digital Garden. We will be holding a series of community project design workshops with each of the five local communities to design the look for each of the Local Gardens. We will work with the local community to customize the design of each Local Garden and identify the services they would like to see. We will work with the local business and entrepreneur community to help inform and design the Vaughan LaunchPad concept.

We will continue our citizen engagement and solicit feedback from our residents throughout the entire proposal development process. We will continue to engage citizens through a multi-channel engagement process.

**Proposal Management and Feasibility Study**

All input from the community project design workshops and citizen engagement will be included in the final proposal, along with the project implementation strategy. In addition to the community project design workshops, we will also undertake a feasibility study to identify project partners, cost specifications and potential vendors for the proposal.

**Pilot Testing**

We will work with our community and partners to develop a prototype for testing. We will create a prototype for a mini pilot to obtain data to support the full proposal. We will develop work with technology partners to identify the technical specifications required and pilot test a prototype. We will work with the community at large and use data to identify an appropriate community and area for the pilot.

## Q10: 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)

### **Partnership Strategy: Collaborative Partnership Approach**

The City of Vaughan's Digital Garden proposal is very much based on a collaborative partnership approach, and to ensure we have the right partners for this project, we will develop a partnership strategy. The City of Vaughan's partnership strategy will identify the partnership structures and framework needed in order for successful implementation of the Digital Garden.

Based on our preliminary concept, we have identified five categories of partners, including telecommunication and technology providers, academic and research institutions, York Region, Service Ontario and other governmental organizations, community institutions and community engagement partners. The next step is to identify the right partners for our project, which will be undertaken during the proposal stage.

Bell Canada will be one of the main partners for our Digital Garden. We currently have a partnership with Bell to provide the fastest broadband fibre in Vaughan, and as part of this investment, we will work with Bell to ensure the necessary infrastructure and technology is in place for successful implementation. Bell is an important telecommunication provider and partner to help us successfully pilot and implement the Digital Garden.

The Digital Garden will consist of a consortium of community, public and private partners. Once we complete our series of project design workshops with the community, we will have a better understanding of the types of partners with whom we will need to engage. Based on the consultations and feedback from the project design workshops, we will know what kind of expertise and technical requirements will be needed.

The City of Vaughan currently works with a number of partners and we will continue to engage these partners during the proposal development stage. For instance, our partnership with the Vaughan Public Libraries will help us bridge and support the digital divide with our Digital Garden proposal. We will continue to work with United Way to ensure our proposal is inclusive and that we support the needs of all communities and no one is left behind. We will continue to work with York Region and consult our upper-tier municipality throughout the proposal development stage.

### **Criteria for Identifying Partners**

When identifying partners for our Digital Garden proposal, the following criteria will be used for the partnership selection process:

- Strong track record and reputation;
- Alignment of skills, expertise and technical requirements, as identified through the project design workshops and feasibility study;
- Commitment to community collaboration and engagement;
- Culture of sharing and open data;
- Resource capacity and support, and;
- Open source and can be replicable.

We will work with our existing partners and our community to identify and select the right partners for our Digital Garden proposal. We will ensure our partners harness the right resources, expertise and strengths in order for us to be successful with our implementation.



**City of Vaughan**

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