The Regional Municipality of Durham
Information Report

To:	Committee of the Whole
From:	Chief Administrative Officer
Report:	#2023-COW-4
Date:	January 18, 2023

Subject:

Intelligent Communities Update

Recommendation:

That the Committee of the Whole recommends:

That this report be received for information.

Report:

1.   Purpose

1.1   To provide an overview of the Intelligent Communities initiatives underway in Durham Region.

2.   Background

2.1   In 2018, the Region of Durham hosted the Hello Tomorrow: Smart Cities Durham Forum.

a.   More than 300 residents, community partners, businesses, academics, students, government officials and tech industry leaders in Durham Region and beyond registered to attend the forum to share feedback on, and learn more about, smart cities approaches and technologies.

b.   Presentations and panel discussions on innovation in Durham Region (including transit, energy, income stability and information technology), smart city innovation, education, leadership in a connected community, and automotive technology and mobility innovation.

2.2   Staff leveraged the extensive public consultation process used to inform the development of the Strategic Plan 2020-2024 and aligned the smart city goals to the strategic plan goals.

2.3 An environmental scan of other municipal smart cities was led by the Canadian Urban Institute. In addition, a series of focus groups and surveys were conducted with leaders from Durham's eight local municipalities and community partners to solicit feedback.

2.4 Most of the feedback focused on the importance of collaboration, engagement, and innovation in creating smart city initiatives. Two additional themes were clear.

   a. The first was that the term 'smart city' did not resonate with collaborators. It was stated that Durham Region is not a city, but instead, it is a series of smart and caring communities (including cities, towns, and rural areas).
   b. The second was that the focus should not be solely on technology and smart sensors, what people often envision a smart city to be. Instead, Durham should focus on projects and initiatives that address community challenges and better the lives of our residents and businesses.

2.5 Regional staff prepared a framework to guide the next steps of creating a smart city. The initiative was renamed the Intelligent Communities Framework.

2.6 Staff learned of the Intelligent Community Forum (ICF), a think tank at the centre of a global network of cities and regions. The mission of the ICF is to help communities in the digital age find a new path to economic development and community growth – one that creates inclusive prosperity, tackles social challenges, and enriches quality of life. The ICF uses a method to support communities on their journey to becoming Intelligent.

2.7 The Intelligent Community Method supports communities with evidence-based strategies for growing the local economy, sustaining growth, and solving the problems that accompany growth.

   a. The ICF method focuses on six critical factors that support a competitive and inclusive community:

      • Connect – digital connectivity and services is the new essential utility
      • Work – building a knowledge workforce that creates economic value through its knowledge, skills, and ability to use information effectively
      • Innovate – helping keep the economic benefits of innovation local and creates culture that engages the entire community in positive change
      • Engage – educating and engaging citizens, businesses, and institutions
      • Include – promoting inclusion by creating policies and funding programs that provide everyone with access to digital technology and connectivity
      • Sustain – improving local quality of life and creates greater liveability

2.8 The ICF hosts an annual Intelligent Community Awards competition to recognize communities on the path to becoming Intelligent Communities.

   a. Following an application submission deadline in January, ICF announces the top 21 Smart Communities of the year in February. The field is then narrowed

to the top 7 Intelligent Communities of the year, announced in June. The Top 7 exemplify best practices in broadband deployment and use, workforce development, innovation, digital inclusion, and advocacy that offer lessons to regions, cities, towns around the world. In October of each year, the ICF announces the top Intelligent Community of the Year at the annual ICF conference.

2.9   To develop an application, staff collected projects and accomplishments from across the region and applied to the Intelligent Community Awards in 2021.

    a.   Durham Region was named to top 21 Smart Communities in 2021.
    b.   In 2022, Durham Region was again named to the top 21 Smart Communities and in June of 2022, Durham Region was named global Top 7 Intelligent Community in 2022 along with communities from Vietnam, Brazil, Taiwan, and Australia.
    c.   At the annual ICF conference in October of 2022, New Taipei City, Taiwan was announced the most Intelligent Community of the Year.

3.   Intelligent Communities Key Accomplishments

3.1   To prepare for the Intelligent Communities Awards application, staff collected stories and initiatives happening across the region and put them into the six ICF categories. Below are examples of some of the exciting Intelligent Community initiatives from across Durham.

3.2   Connect

    a.   The Regional Broadband Strategy, approved by Council in 2019, outlined significant steps to realize the vision for a Regional Broadband Network as an extensive fibre optic backbone along regional roads to bring the digital infrastructure into communities in need. Service providers would then be able to tap into the backbone and build out local connections inside the communities. The Region developed partnerships with local internet service providers and applied for significant funding from the provincial and federal governments to realize this vision.

        •   The Region's first municipally owned broadband infrastructure project was completed ahead of schedule and under budget. The construction took seven months to complete 36 km of fibre between Uxbridge and Pickering. This provides necessary infrastructure to unserved and underserved communities in the region. Phase 2 is currently underway.

3.3   Work

    a.   Durham's three post-secondary institutions each place significant value on experiential and work-integrated learning opportunities for students. These activities enrich student learning and prepare them for their future careers. For the organizations who work with them, it is a valuable and effective way to

access the fresh thinking, skills, and capabilities that students offer while also building a network of future employees.

- The Region launched the CityStudio Durham partnership in 2020. CityStudio is a proven model of experiential learning and civic engagement focused on developing tomorrow's leaders by bringing municipal government to the classroom. In Durham, the Region has partnered with Durham Regional Police Services and our post-secondary schools in Durham: Ontario Tech University, Durham College and Trent University Durham GTA and have hosted more than 300 students to date.

b. Access IO is an invitation-only, high-energy, and high-impact event series focused on sourcing new technologies, investing, and making connections, telling stories, promoting the investor ecosystem, supporting innovation, and growing the economy. The events are supported by regional and municipal economic development teams, Durham's angel investor network and Durham's accelerator/incubator programs.

- The Access IO events are a great example of a program hosted by the Durah ecosystem leading to successful outcomes for local businesses and start-ups. The event in 2021 included 75 angel investors, 200 industry professionals and 15 start-ups. The success led to the creation of three Access IO events in 2022.

3.4   Engage

a. Community engagement is critical component of any municipal program development or service delivery. A project that will impact the entire community is myDurham 311. It will modernize the customer experience by consolidating all call centres into one and offering residents various methods to engage including online, phone, website, chat or in person. The myDurham 311 program is coordinated with the local area municipalities to improve overall engagement with the community.

- To enhance the myDurham 311 service, the Region partnered with an innovative small business to leverages smart home devices as a method to provide residents with information. Now residents can find out when the next bus is arriving or when their recycling will be picked up by simply saying Hey Google" or "Hey Alexa, talk to myDurham 311."

3.5   Innovate

a. With 10 per cent of Durham's population in a rural area, regularly scheduled public transit service was not cost effective to operate or sufficient to meet the mobility needs. Durham Region Transit's On Demand program meets the needs of rural residents and those located in urban areas that are difficult to serve by conventional transit. It is a flexible service delivery model that

provides customers with public transit options based on their trip needs, whether it's travelling stop-to-stop or facilitating connections to frequent routes. Durham is one of only two jurisdictions in Ontario that have buses available every 30 minutes 7 days a week.

3.6   Sustain

a.   Durham Region's greenhouse gas emissions are mostly attributed to transportation and the existing built environment. The Durham Greener Homes program was launched with overwhelming interest from the community. It is a residential energy retrofit that is stimulating homeowner demand for energy efficient and renewable energy retrofits. The program was launched in April 2022 for an initial four-year implementation period. By 2026 more than 1,000 deep energy retrofits are expected to be completed and close to 250 jobs will have been created.

3.7   Include

a.   Literacy goes beyond the ability to read and write, and now includes the computational skills. Students who live in low-income families and underserved communities can be disadvantaged if they don't have access to technology and educational programs to build these skills. The STEAM 3D Maker lab at Ontario Tech University allow underserved communities to have access to technology and educational programs to build their digital literacy skills. Students learn how to tinker collaboratively with a problem and keep working until they find a solution. They learn to be innovators, thinkers, and problem-solvers. These programs help to reduce the digital divide among communities.

4.   Intelligent Communities Event

4.1   On November 29, 2022, Durham Region hosted an Intelligent Communities event to celebrate Durham being named a global top 7 Intelligent Communities of the year.

a.   Durham Region was recognized as one of the world's leading Intelligent Communities. More than 50 community members from post-secondary, local area municipalities, and businesses attended to hear from our keynote speaker, Robert Bell share the Region's journey to the top 7.

b.   18 local intelligent community initiatives were showcased with short presentations or posters.

5.   Relationship to Strategic Plan

5.1   This report aligns with/addresses the following strategic goals and priorities in the Durham Region Strategic Plan:

a.   Goal 1: Environmental Sustainability Objective: To protect the environment for the future by demonstrating leadership in sustainability and addressing climate change

- 1.1 Accelerate the adoption of green technology and clean energy solutions through strategic partnerships and investments
- 1.4 Demonstrate leadership in sustainability and addressing climate change

b.   Goal 2: Community Vitality Objective: To foster an exceptional quality of life with services that contribute to strong neighbourhoods, vibrant and diverse communities, and influence our safety and well-being.

- 2.1 Revitalize existing neighbourhoods and build complete communities that are walkable, well-connected, and have a mix of attainable housing
- 2.3 Influence the social determinants of health to improve outcomes for vulnerable populations
- 2.4 Support a high quality of life for all through human services delivery
- 2.5 Build a healthy, inclusive, age-friendly community where everyone feels a sense of belonging

c.   Goal 3: Economic Prosperity Objective: To build a strong and resilient economy that maximizes opportunities for business and employment growth, innovation and partnership

- 3.1 Position Durham Region as the location of choice for business
- 3.3 Enhance communication and transportation networks to better connect people and move goods more effectively

d.   Goal 4: Social Investment Objective: To ensure a range of programs, services and supports are available and accessible to those in need, so that no individual is left behind.

- 4.2 Build awareness and community capacity to address poverty

e.   Goal 5: Service Excellence Objective: To provide exceptional value to Durham taxpayers through responsive, effective and fiscally sustainable service delivery.

- 5.4 Drive organizational success through innovation, a skilled workforce, and modernized services

6.   Conclusion

6.1   Durham Region is a place where connections are made. The Region will continue along the path to an Intelligent Community in collaboration with community organizations, local area municipalities, businesses, not-for-profits, incubators, and post-secondary institutions.

6.2   Durham is a place where big challenges are addressed. Durham's achievements show our collective commitment to creating a connected network to improve economic competitiveness, engage citizens and increase connectivity to support smarter, healthier, more equitable and sustainable communities.

6.3   Report prepared by: Lindsay Beyger, Policy Advisor and Alison Burgess, Manager, Corporate Initiatives.

6.4   Report approved by: Sandra Austin, Director of Strategic Initiatives.

Respectfully submitted,

Original Signed by

Elaine Baxter-Trahair
Chief Administrative Officer