

Staff Report



To	Committee of the Whole
Service Area	Office of the Chief Administrative Officer
Date	Tuesday, February 7, 2023
Subject	Smart Cities Update – Our Food Future and Circular Opportunity Innovation Launchpad

Recommendation

1. That the report “Smart Cities Update – Our Food Future and Circular Opportunity Launchpad” dated February 7, 2023, be received.
-

Executive Summary

Purpose of Report

To provide Council with an update on the progress of the Smart Cities initiatives – Our Food Future and Circular Opportunity Innovation Launchpad (COIL) - since the last update presented in February 2022.

Key Findings

Since the last report to Council, Our Food Future and COIL have achieved many milestones while adapting to the changing needs of our communities in the context of the COVID-19 pandemic, and the impacts of climate and world events. As inflation has rapidly increased food insecurity, Our Food Future collaborators have made strides in advancing food equity and supporting the emergency food relief sector across our region, an essential first point of access for addressing broader community issues around housing, homelessness and poverty. Our program suite has expanded to include new industry sectors and a renewed focus on the essential links between the circular economy to combatting climate change. The Smart Cities program has positioned Guelph-Wellington as an early leader and exemplar on the circular economy nationally and internationally.

Notable achievements at the end of the third year of this work include:

- Supported 40+ food relief/food access projects through our Nutritious Food Workstream and COIL, including preparing and delivering over 88,000 meals to community members.
- Worked with over 240 enterprises to adopt circular practices, including supporting over 100 businesses across Ontario through COIL programs in the last year.
- Continued to gain national and international recognition including special mention at the Milan Pact awards, being featured as a leading city by the Ellen McArthur Foundation, and speaking role at COP27.

- With support from the Cooperators launched COIL Zero Waste Economic Transformation Lab (ZWETL) which is working to create a circular economy in the construction, renovation, and demolition sectors.
- Prevented the equivalent of approximately 116,419 tonnes of GHG emissions, with is the equivalent of removing over 24,000 cars off the road for a year.

Details on key metrics, success stories and go forward action plans are attached in Smart Cities 2022 Annual Report, *Connecting the Dots*.

Strategic Plan Alignment

The Our Food Future and COIL initiatives specifically align with the Strategic Plan priority areas of Powering our Future, Building our Future and Sustaining our Future.

Our Food Future and COIL support local and regional economies through the creation of new circular food businesses/collaboration opportunities and increasing revenues by recognizing the value of waste.

The Our Food Future initiative contributes to the [Building our Future](#) priority area of the Strategic Plan by facilitating food access programs that nurture social well-being, increase access to affordable, nutritious food, all of which builds strong, vibrant, safe and healthy communities.

Key goals to reduce food waste in businesses and residences will result in a reduction of GHG emissions and continue the City's commitment to care for the local environment which is directly supportive of the [Sustaining our Future](#) priority area.

The Smart Cities Office values inclusion and is committed to listening to our community, reflecting on internal bias and delivering programs and services that are inclusive and responsive to the needs of communities who have been historically marginalized.

Financial Implications

The Smart Cities Office seeks private and public sector funding and support for the ongoing work of Our Food Future and COIL to position Guelph-Wellington as a circular economy innovation hub. One of the key deliverables of the initiative is to demonstrate the degree to which the original \$10 million in funding can leverage additional investment from partners. In addition to the original \$10 million, over \$17 million in additional funding has been secured to date, including \$5 million in FedDev funding to the City for COIL and over \$1 million in corporate sponsorship.

Core funding for Our Food Future (INFC) and COIL (FedDev) comes to conclusion at the end of Dec 2023. These initiatives are on track to achieve all milestones, deliverables and objectives. City, County and community collaborators are planning for the final year of activities, the natural wrap up of several projects and the 're-homing' of aspects of the work. Concurrently, efforts are underway to secure funding (federal, provincial, private sector) for a proposed three-year Circular Economy Action Plan, developed with community collaborators to continue to build on the success of these initiatives.

Smart City staff will report back in June with the results of these funding advocacy efforts and the final plans for transition of this work.

Report

Context – Growing momentum of circular economy in Canada and globally

A shift to a circular economy is urgently needed if we are going to address climate change. Ellen MacArthur Foundation states that roughly 55 per cent of emissions can be tackled by the transition to renewable energy – while the remaining 45 per cent of emissions must be addressed in how we make and use products and food, and manage land. Transitioning to a circular economy not only generates greater economic value from resources, but it is also an essential strategy to address climate change. Over eighty countries have included action on the circular economy as part of their commitments under the Paris Climate Agreement.

Since Our Food Future launched in 2020, we have seen momentum around the circular economy increase significantly. We are seeing:

- Canada's largest trading partners setting targets and making major investments into the circular economy including China ([US\\$468 billion investment by 2024](#)) and the EU ([€10 billion investment by 2023](#))
- Major corporations in the food sector, including General Mills, McCain Foods and Danone have committed to creating more regenerative and circular supply chains
- Hundreds of millions in new Canadian venture capital coming to market specifically targeting circular economy innovations.

Guelph-Wellington has positioned itself at the forefront of this global movement. Our initiatives have been featured in reports at the World Economic Forum, the Ellen McArthur Foundation and at COP27. Our Food Future projects have received recognition from the Milan Urban Food Policy Pact, a global network of 250 Mayors committed to developing sustainable food systems that are "inclusive, resilient, safe and diverse."

Circular Economy & Local Government

Transitioning to a circular economy must happen at the local level, and municipalities can both support and steer the evolution. Municipal public policy influences activities such as waste management, zoning, and urban planning which can be engaged as drivers of the circular economy. Municipal governments also have the power to create markets for circular products and services through public procurement and to cultivate localized networks and innovation systems.

It is estimated that 44 per cent of Canada's greenhouse gas emissions (GHGs) are controlled by municipalities. Both the City of Guelph and the County of Wellington have climate plans and are committed to reducing GHGs. The City of Guelph is a designated member of the Cities Race to Zero campaign due to its pledge to a 100 per cent renewable energy transition, commitment to carbon neutrality, and acknowledgment of the climate crisis. The County of Wellington also has a [climate change mitigation plan](#) that commits to a 6 per cent reduction in GHGs by 2030 and an 80 per cent reduction by 2050.

The Smart Cities Office is at the forefront of a nationwide discussion on how the circular economy can address climate change and advance a waste prevention agenda that maximizes local economic opportunity. In fall 2022, with funding from

Desjardins, we launched the COIL Climate and Circularity Solutions Hub, that's advancing research and systems tools to ensure a carbon negative circular economy.

In 2022/23 the City of Guelph and County of Wellington are participating in the [Canadian Circular Cities and Regions Initiative](#), connecting 10 local governments with knowledge and tools to accelerate circular economy strategies. This initiative is led by key partners such as the National Zero Waste Council, the Federation of Canadian Municipalities, the Recycling Council of Alberta and RECYC-Quebec.

As part of the City's [Solid Waste Master Plan](#), approved by Council in spring 2022, Solid Waste Resources (SWR) is developing a circular economy policy and framework to review and align existing strategies and plans across the corporation through a circular economy lens.

The Smart Cities Office alongside SWR also represent the City as a member of the National Zero Waste Council (NZWC). In joining the country's largest metropolitan centres, the City of Guelph offers a unique position as a mid-sized city. Our strong partnership with Wellington County also offers an important perspective for resources, networks and toolkits that are adaptable to the place-based needs of similarly sized communities from coast to coast to coast.

Annual Report Overview

Key Activities: 2022

The **Connecting the Dots – Annual Report 2022** (Attachment 1) provides an update on the many new and expanded projects Our Food Future and COIL have launched over the past year, along with the cumulative impacts the Smart Cities initiative has had for city and county communities since its launch in 2020.

Entering the final funded year of our initial program, Smart Cities has worked with community collaborators to develop prioritized action plans for each of our workstreams with the goal of transitioning Our Food Future from a city and county led initiative into a longer-term whole of community movement. To support this transition, the report includes some initial visualizations, developed in collaboration with One Earth, on potential future states of our regional circular food economy which we believe will provide a north star to continue guiding this work.

Building a Circular Food Economy Movement

The goal of Our Food Future and COIL is to transform the food system by embedding circular economy practices throughout municipal departments, local organizations, and residents as well as catalyze a circular food economy social movement that will outlive the program. Throughout Guelph-Wellington, the project is sparking a conversation that inspires the community to see themselves as agents of change, participating in and advancing the goals in novel ways.

Below is a snapshot of program achievements highlighting some communications and engagement activities that have advanced this movement:

- Presented at over 162 conferences, broadcasts and events, locally, nationally and internationally, reaching an audience of over 1,107,653 people

- Launched the [Reimagine Food Campaign](#) that will raise awareness and spark conversation with local businesses and residents about lighter living, food access, and the real costs of food waste.
- In collaboration with Anthesis Provision, launched the Certified Upcycled™ brand in Canada, a consumer facing standard (similar to Fair Trade) that guarantees a minimum percentage of upcycled content.
- Developed a strong circular economy business community through the COIL alumni network, with regular online networking sessions and webinars.
- Launched the Upcycled Holiday Food Box, a giftable package of locally produced products that let residents taste the circular food economy.
- Piloted a series of engagement and circular innovation sessions with students in local primary and high schools.
- Funding of \$35,000 to the Traditional Indigenous Medicine Bundles project to support culturally important and nutritious food bundles to Indigenous community members across Haldimand Tract.
- Produced meaningful content for capacity building and education:
 - On Our Plate, a quarterly newsletter with a reach of 903
 - [In Conversation with Our Food Future](#), a monthly podcast series which has been downloaded 1311 times.

Circular Opportunity Innovation Launchpad

Since starting operations in October 2021, COIL has launched 11 programs aimed at businesses innovation and acceleration, working with over 100 circular businesses across southern Ontario. Outcomes from COIL programs have included new jobs, patentable technologies and over \$10 million in projected new revenues from new circular products. COIL has also seen a huge increase in application numbers, most notably, 125 applications in the Activate Accelerator this fall, a 391 per cent increase from the previous cohort.

To date, 85 businesses from Guelph and 66 businesses from Wellington County have started or expanded circular practices as a result of being involved with the Smart Cities initiative.

In January 2022, COIL launched ZWETL with funding from the Cooperators to transfer learnings from the food sector into other sectors of the economy starting with construction, renovation and demolition materials.

Impact

We have designed, developed and/or delivered 80 cross-functional pilots/projects that connect our four goals and demonstrate broad community impact. Attached (Attachment 2 – Our Impact 2020-2022) is a graphic showing the broad impact the program is having in the community.

What's Next:

Food System Resiliency Table

To coordinate and strengthen community approaches to food access and equity, Our Food Future convened a Food System Resiliency Table (The Table). Made up of 23 organizations and community leaders, the Table is working to review and revise the Guelph- Wellington Food Charter, a community created document which was previously endorsed by Council in 2011. A working group has been soliciting

community feedback on modernized language, UN SDG alignment and graphic representation. The Table anticipates finalizing the updated Food Charter by fall 2023, at which time it may approach Council for a renewed endorsement.

Construction, Renovation and Demolition Waste Pilots

In January 2022, COIL expanded into the construction, renovation and demolition (CRD) sector through the COIL ZWETL, funded by the Cooperators. In the last year, ZWETL, in collaboration with SWR and Building Services has completed substantial research on CRD waste across our region. This winter ZWETL and SWR is launching two innovative pilots to help source separate and divert construction waste from new residential building projects in Guelph. CRD materials can make up 65 per cent of waste sent to landfill, and similar source separation approaches in other provinces have resulted in recycling rates of over 90 per cent.

COIL Network

COIL has been approached by several municipalities across Canada interested in establishing their own instances of the COIL. Smart Cities believes there could be significant value in establishing a network of COIL clusters across the country building on and extending the work we have pioneered in Guelph and Wellington County.

To date, two regional organizations have signaled their interest in helping co-create this model. Interested collaborators include:

- Vancouver Economic Commission (serving Vancouver region and BC)
- Halifax Partnership (serving the Maritimes)

Discussions are underway with collaborators around potential funding and operating strategies. From initial discussions with potential federal funders, we feel optimistic that there would be interest in helping Guelph-Wellington spread our circular economy expertise to other regions across the country.

Regenerative Agriculture

Regenerative agriculture describes a suite of practices focused on improving the soil microbiome and is a key approach in transitioning the agricultural sector to a more sustainable model. In the context of Our Food Future, this program aims to encourage a shift in agricultural practices without placing more stress on our food producers. The Experimental Acres Pilot launched last spring by the County in partnership with local producers, agronomists and the University of Guelph's Arrell Food Institute and ICON program worked to better understand regenerative practices in our local environment and de-risk the learning process.

Last summer 15 farms across Wellington and Dufferin Counties participate in the pilot, identifying a number of strategies to reduce and sequester GHGs on farm while improving soil health.

Over the 2023 season, this pilot will be expanded to include more farms in Wellington, Dufferin and Gray County. Our Food Future is also working to share learnings with key regional agricultural organizations.

Climate-Smart Circularity Assessment Matrix

Not all circular economy practices necessarily result in a net decrease in emissions. For the circular economy to combat climate change we need effective, approachable ways to direct energies and resources towards those practices that do reduce emissions and are “climate-smart.”

To that end, COIL’s Climate and Circularity Solutions Hub is working with Ivey Business School, Arrell Food Institute, CSA, Anthesis Provision, Ducks Unlimited and Network for Business Sustainability with funding from Desjardins, Scotiabank, Maple Leaf Foods to develop a Climate-Smart Circularity Assessment Matrix. When complete this tool will serve as a common standard that can be used by funders, insurers, supply chain customers and consumers to support practices or producers that are reducing emissions using circular economy strategies.

The assessment framework concept is being piloted with regenerative agriculture and will include an innovation challenge through COIL in spring 2023. The intention is to subsequently expand the model into other sectors of the economy.

Financial Implications

Leveraged Funds

Alongside our community collaborators, the Smart Cities Office seeks private and public sector funding and support for the ongoing work of Our Food Future and COIL to position Guelph-Wellington as a circular economy innovation hub. One of the key deliverables of the initiative is to demonstrate the degree to which the \$10 million in funding can leverage additional investment from the community and contribute to the building of the circular economy. As of January 2023, \$17 million in additional funding has been secured, including:

- \$4.96 million from FedDev Ontario to support the COIL program
- \$4.95 million from Canadian Institute of Health Research for the SMART Training Platform via the University of Guelph
- \$1.5 million from the Helderleigh Foundation for the University of Guelph Food Literacy research for the Guelph Family Health
- \$700,000 from the Co-operators Group to launch and support COIL’s ZWETL (details below)
- \$250,000 from Desjardins to launch the COIL Climate and Circularity Solutions Hub.
- \$100,000 from Scotiabank 2022 Net-Zero Research Fund to support regenerative agriculture initiatives.

Contract Management

The Smart Cities Office continues to maintain funding agreements in good standing with both Infrastructure Canada and FedDev Ontario. Throughout the funding period, the Smart Cities Office has established and monitored agreements with six key project collaborators that provide leadership and delivery of a range of programs. These collaborators include the County of Wellington, 10C, Wellington-Dufferin-Guelph Public Health, Innovation Guelph, Anthesis Provision, and Toward Common Ground. The project management plan continues to be monitored in accordance with the City of Guelph’s Tier 1 project management protocols.

Consultations

We work cross-departmentally with SWR, Economic Development and Tourism, Engineering and Transportation Services, Planning and Building Services, and the Parks Department to inspire and support the shift to a circular mindset throughout the organization. Internal teams have articulated Circular Economy (CE) ideas in the City's [Solid Waste Master Plan](#). The City's Economic Development and Tourism Strategy positions the CE as a set of tools for attracting investment to grow a resilient local economy, and champion our innovation ecosystem. Further we work in partnership with many departments at the County.

Next Steps:

Over winter 2023, Smart Cities is working with collaborators to stand up the governance and collaboration structures that will advance the Our Food Future Workstream Action Plans over the next three years as a primarily community driven project. During the 2023 strategic planning and 2024-2027 multi-year budget cycle, Council will determine the role the city will have in collaboration and investment in our regional food system, including any potential budget allocations.

Smart Cities is currently assessing a viability of additional federal funding to extend the COIL project. We are optimistic of potential additional funding from FedDev Ontario as well as corporate donors to support an emerging national COIL network.

As we get more clarity on the potential for new internal or external funding, Smart Cities will develop a final plan to be presented by June 2023 for Council's consideration.

Attachments

Attachment 1 – Connecting the Dots: Annual Report 2022

Attachment 2 - Our Impact 2020-2022

Attachment 3 - Smart Cities Office Update Report to Council Presentation

Additional Resources

[COIL Promotional Video](#)

Departmental Approval

Shanna O'Dwyer, Acting General Manager/City Treasurer, Finance

Report Authors

Ashlee Cooper, Program Advisor, Smart Cities Office

Molly Fremes , Program Advisor, Smart Cities Office

This report was approved by:

David Messer

Executive Director, Smart Cities Office

Office of the Chief Administrative Officer

519-822-1260 extension 3661

david.messer@guelph.ca

This report was recommended by:

Scott Stewart

Chief Administrative Officer

Office of the Chief Administrative Officer

519-822-1260 extension 2221

scott.stewart@guelph.ca