

Seeding Circularity in Communities

FINAL REPORT 2023

6

The story of
Our Food Future
and COIL

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Building a regional
circular food economy:
collaborator reflections

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Lessons Learned: 10 directions
for a circular future



The Future is Circular – and Our Food Future helped show the path forward

Our food system has wicked problems. The way we grow, process, and distribute food has become so complex and multifaceted that it can be hard to imagine making widespread change. Food nourishes, delights, and connects us, yet the global food system we've built is wasteful, destructive, and ultimately unsustainable. Despite enormous increases in crop yields, 821 million of us are still going to bed hungry.

Against this inertia, a group of change-makers in Guelph and Wellington County began collaborating to articulate a shared vision of a regional circular food system, an antidote to the climate crisis and biodiversity loss that supports economic prosperity and community wellbeing.

This idea not only inspired more organizations across our region and beyond to join the movement, it convinced Infrastructure Canada to award Guelph-Wellington \$10 million through the Smart Cities Challenge to turn this vision into a reality called Our Food Future.

Over four incredible years, this project has worked with more than 1,000 stakeholders to stand up 80+ projects that tackle challenges across all parts of the food system. Our Food Future has shown that when a region comes together around a common cause, not only can we make real change, we can inspire others far beyond to build on what we've done.



The results of all this hard work speak for themselves. Not only is Guelph-Wellington exceeding the targets we set in 2019, the project scaled into new economic sectors, launched a sister initiative, and garnered national and international recognition as a leading example of what local governments should be doing to accelerate the transition to the circular economy.

With the conclusion of Our Food Future in December 2023, there is so much that we can be proud of as a community. For all of us in the Smart Cities Office, it has been the privilege of a lifetime to work with so many innovators and changemakers to implement truly transformative initiatives that will positively impact our region and Canada for generations.

Our Food Future has been a whole-of-community project from its inception. Our success is thanks to a diverse coalition of public, private, and not-for-profit organizations who joined in — volunteering

time, contributing ideas, investing money, and implementing solutions. Therefore, it's only fitting that Our Food Future's final report highlight this diversity of experiences and learnings that have come from our many collaborators. Our hope is that the results won't just speak to municipal governments, but also to the community change makers who can find inspiration and learnings they can use to advance the circular economy in their community.

If the past four years have taught us anything, it is that the circular economy is the future — and momentum is building fast. We hope the collective lessons of Our Food Future will inspire and accelerate this transition towards a more sustainable, just, and prosperous world.



Smart Cities Office team

City of Guelph | County of Wellington
December 2023



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An Initiative of



Lead Funders



Corporate Funders



Delivery Partners





Congratulations to everyone involved in this transformative community initiative.

The Our Food Future project started in 2019 as a seed of an idea: can data, partnership, and imagination lead us back to a more circular food system? One with sustainability, equity, and innovation at the core? With local governments taking the lead?

A bold bid to Infrastructure Canada's Smart Cities Challenge led to \$10 million in funding over four years to plant this seed and help it grow.

And how it grew! From greenhouse gas (GHG) emissions reductions equal to removing tens of thousands of cars from the roads, to ground-breaking programs that are keeping thousands of tonnes of food from landfill, to helping feed people in our community. The project has realized tremendous accomplishments in just four years.

The program succeeded despite navigating around extraordinary circumstances, namely the COVID-19 pandemic and its aftereffects including growing food insecurity, inflation, and economic uncertainty. Our Food Future and Circular Opportunity Innovation Launchpad (COIL) were among our community's essential supports, championing and funding circular innovation for food businesses, leading programs making and delivering healthy meals to families, and sparking a new interest in growing food at home, and in neighbourhoods.

The secret recipe has been the size of this proverbial kitchen: the project has seen unprecedented collaboration, co-led by the City of Guelph and the County of Wellington and involving hundreds of stakeholders across the region: local policymakers, businesses, researchers, nonprofit organizations, and community builders. We all came together with a united passion to make a difference, and set the stage for permanent, system-level change.

As this phase of the work concludes, that stage has been set: embedding circular principles in local programs, policies, and especially in the hearts of our community. We have a clear mandate for long-term impact.



Mayor Cam Guthrie,
City of Guelph



Warden Andy Lennox,
County of Wellington

The story of Our Food Future

Transitioning to a regional circular food system is one of the most powerful things we can do to tackle climate change, regenerate our natural systems, and provide healthy nutritious food for all.

In 2018, community stakeholders including local policymakers, food researchers, business leaders, and NGOs from across Guelph and Wellington County gathered to explore how our food system should evolve. As a Canadian agriculture hub, the region had more than a century of food knowledge, skills, and innovation under its belt. However, with climate change and food access concerns growing more critical than ever, it was a time to step back, employ our strengths, and envision a better way forward.

The group asked: What if the food system could foster innovation, collaboration, and system-wide change throughout many communities and sectors, all in support of healthy local ecosystems, thriving communities, and a prosperous regenerative economy?

What could we learn from traditional livelihoods where there is no such thing as waste? How could we draw on smart technology to guide the work with solid research, data, and evidence?



Bold goals were set to increase access to nutritious food, reduce waste, and build strong, circular businesses.

Within two years, Guelph-Wellington had launched Our Food Future: a first-of-its-kind undertaking to revitalize and modernize the circular food economy. Ten million dollars from Infrastructure



Collaboration amongst project stakeholders and community members in facilitated workshops, planning sessions, surveys, conversations and design charettes ensured a breadth of informed community voices contributed to the Our Food Future work over the four year project trajectory.



Canada's Smart Cities Challenge officially launched this bold vision to **accelerate a circular regional economic system inspired by nature's regenerative processes and traditional cultures that live in harmony with the earth.**

The goals by 2025? Double current access to nutritious food for those who need it most, support at least 50 new circular businesses and collaborations, and generate significant value from food by-products (formerly referred to as food waste).

To hit these marks, organizers created a theory of change for a place-based, system-wide approach with objectives and strategic interventions in eight fundamental areas of the food system value chain:

- growing, production and land use,
- processing and distribution,
- buying, selling and sharing,
- business innovation,
- waste reduction and recovery,
- access and inclusion,
- community and food culture, and
- enablers for system change such as policy and funding.

What is a Circular Food System?

In our current food system, material flows in one direction — from production to disposal. This model has excessive waste and requires unnecessary energy, making it expensive both financially and environmentally.

A circular food system is built on 4 principles:

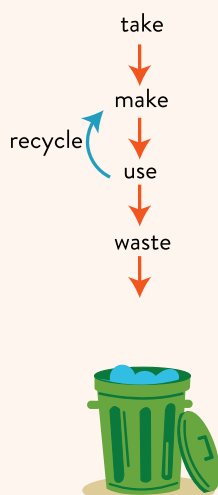
- It values, shares, and celebrates a diversity of affordable, nutritious, and culturally relevant foods that support a healthy, resilient community.

- It inspires and accelerates circular businesses and collaborations to create a thriving, circular, and regenerative economy.
- It respects planetary boundaries by recognizing the impact of wasted resources and the value of what's being thrown away.
- It enables the systems change required for a circular regional economy through collective knowledge, governance, and action.

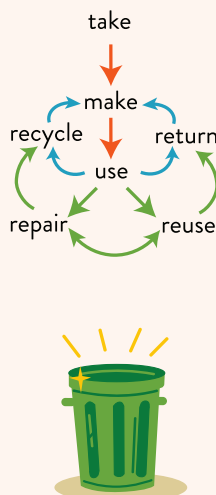
LINEAR ECONOMY



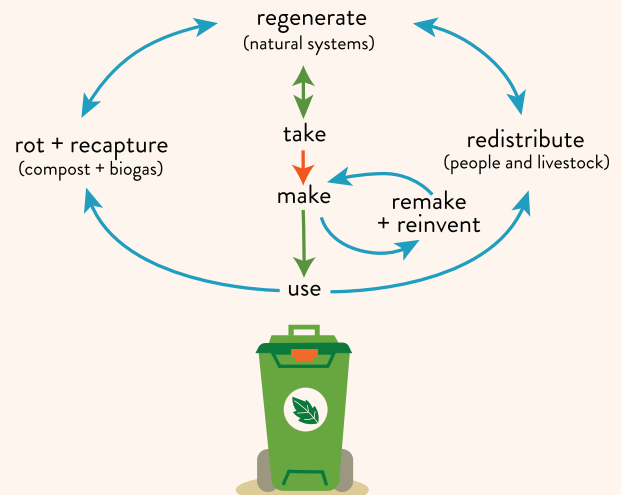
RECYCLING ECONOMY



CIRCULAR ECONOMY



Circular Food ECONOMY



Guided by our focus areas (page 10), programs and initiatives hit the ground quickly. Most of the work had barely started as the 2020 pandemic spread across the world, causing some projects to pause, and others to pick up steam. A handful of examples:

- Rapidly conceived pandemic support initiatives were escalated and deployed, including emergency food home delivery, urban agriculture supports, food gardening kits for kids in lockdown, and shifting farmer's markets online.
- By working with circular economy experts, businesses examined how to reduce energy and waste in their production and find new purpose for previously unused byproducts. New businesses launched quickly, and in just a couple of years, some had grown to be national players.
- Farmers experimented with regenerative agriculture practices that maintain the life and vitality of the soil while reducing emissions. Participation doubled between the first and second years of the program.
- Researchers analysed vast sets of data to identify waste hotspots across the entire food system from land to plate, so that focused interventions could be implemented. The methodologies have since been adopted by municipalities across Canada.

- Community food access projects sprouted in neighbourhoods, including a garden specifically dedicated to removing barriers for new Canadians to grow culturally appropriate crops.
- Artificial intelligence on waste collection vehicles helped identify wasted food trends while expansive consumer behaviour research furthered the understanding, all to guide community education programs to reduce wasted food and prevent it from ending up in landfill.

The energy and enthusiasm were infectious as word spread across the sector and community.

Early victories such as meeting the target to accelerate 50 circular businesses far ahead of schedule didn't go unnoticed. In fact, resounding interest from food-related business and nonprofits looking to step up their social enterprise capacity led to additional funding and a sister initiative, Circular Opportunity Innovation Launchpad (COIL), which separated and significantly ramped up the business support work thanks to an additional \$5 million funding from the Federal Economic Development Agency for Southern Ontario. COIL subsequently attracted over \$1 million more in private sector funding to expand the work beyond food into other sectors such as construction, renovation, and demolition. Attracting corporate dollars to advance climate-smart priorities was a huge win.



As word spread about the projects and their impact, presentations, awards, and media recognition came close to home and from across the world: national bodies such as the Federation of Canadian Municipalities, the acclaimed annual United Nations Climate Change Conference, and the Milan Urban Food Policy Pact all celebrated the project.

Working together has proven to be the secret recipe. A growing list of collaborators are coaching companies hungry for progress, piloting interventions to cut waste in the hotspot areas that research revealed, and engaging the public to explore community-led solutions. Local governments are sharing resources and rethinking policies, business competitors are working shoulder to shoulder, and community organizations are pooling their energies to address systemic issues that affect food security.

The efforts are working. By 2023, nearly 84,860 tonnes of food were diverted from landfill (equal to about 565 million apples), 20,500 people saw increased access to affordable, healthy food, 310 and-counting businesses adopted more circular practices and product innovation strategies, and 168,788 GHG emissions were prevented. See page 22 for a full picture of the impact of these projects.

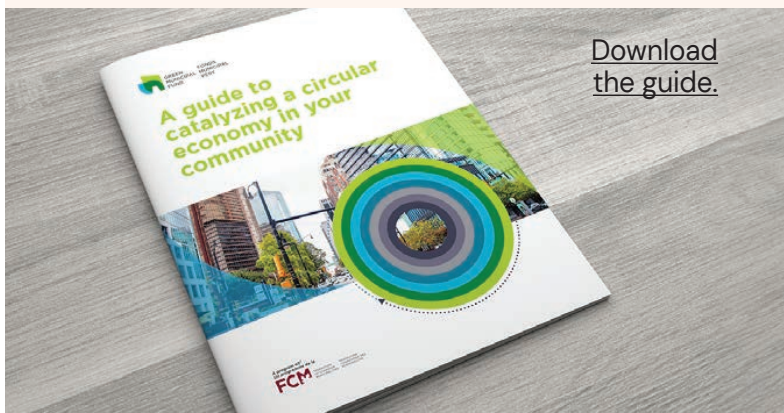
Now, other municipalities across the country are eagerly adopting some of the project methodologies — meeting a goal set on day one to ensure the work is scalable, transferable, and accessible to all. Larger Canadian cities are also applying some of the theories, and further afield, the work is being recognized on the most significant world stages where the circular economy is at the forefront of progress.

As the project's final year commenced, the work culminated in comprehensive action plans authored by the project's three worktables focused on business, community health, and environment. Together, they present the scaffolding and a clear call to action to keep the work moving past its initial funding phase, embedding the principles, practices, and successes into the far reaches of the communities across Guelph and Wellington County, and in the hearts and minds of its leaders and residents who will carry the baton forward.

Sharing what we've learned with municipalities across Canada

In 2022, the Federation of Canadian Municipalities' Green Municipal Fund launched [A guide to catalyzing a circular economy in your community](#), a comprehensive primer to help elected officials and municipal staff in waste management and operations who are interested in developing and strengthening local circular economy initiatives.

The guide is an extensive case study of the Our Food Future and COIL initiatives and was created following interviews with Guelph-Wellington project stakeholders and project review. It is designed to serve as an active resource to help communities adopt circular practices across government services and beyond. The booklet includes examples, exercises, and worksheets to support municipalities through the ideation stage of their circular economy transition to identify opportunities, potential partners, and community engagement mechanisms.



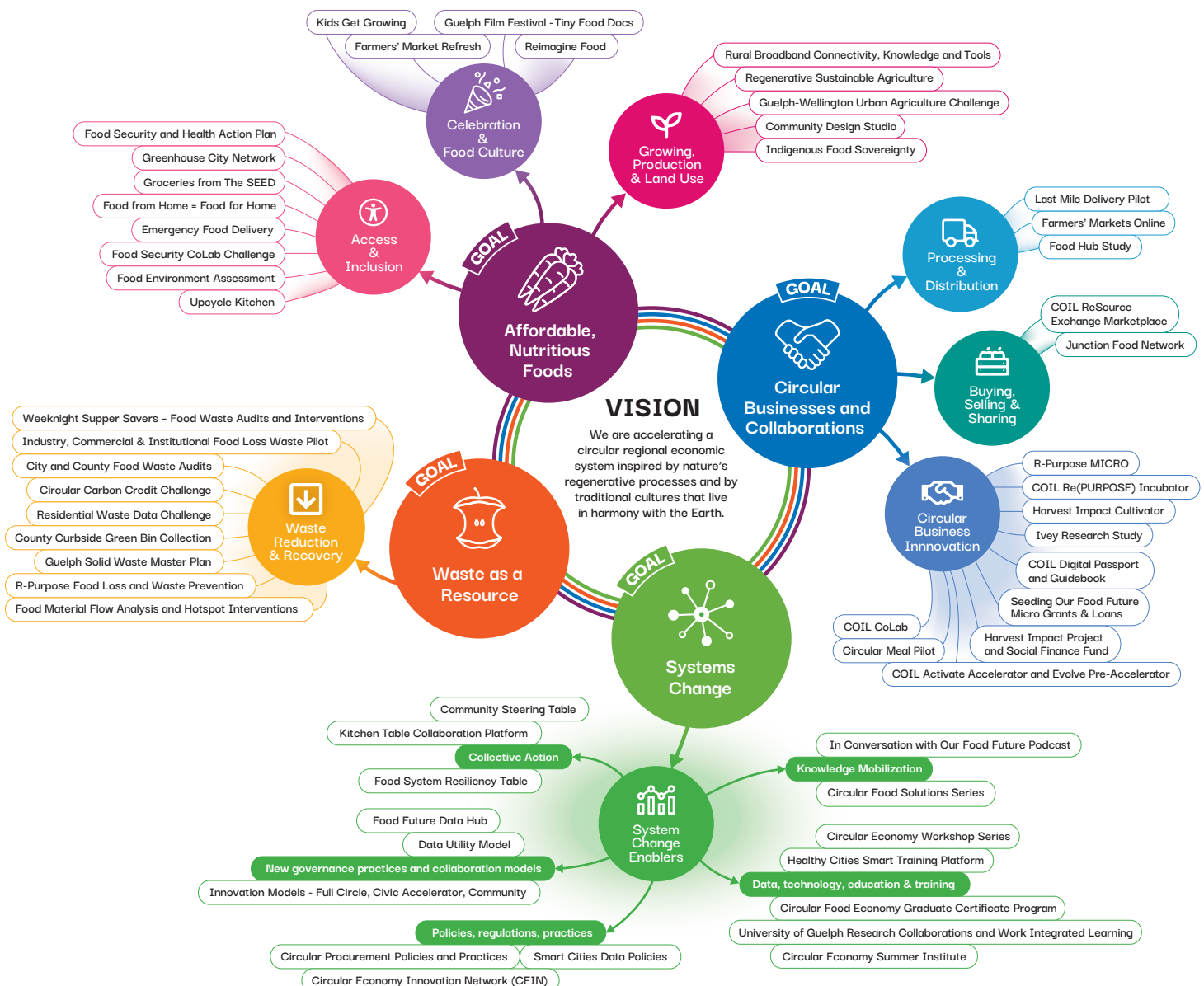
[Download the guide.](#)

"By making the circular economy a key part of your municipality's waste strategy," the Fund's website notes, local governments can "tackle pressing environmental challenges like the climate crisis, biodiversity loss, and pollution. In a circular economy, materials are reused and recycled rather than thrown away, which can improve climate resilience, increase productivity, create new economic opportunities, and address social inequities."

Program overview by Strategic Intervention Area

Bringing together leaders from across the food sector, workstream tables were assembled to focus on three initial goals: Waste as a Resource, Affordable, Nutritious Foods, and Circular Businesses and Collaborations. A fourth goal was later identified — Systems Change — which was led by Smart Cities Office staff. Across dozens of planning meetings, research, and discovery sessions, these groups identified eight strategic

intervention areas that together represent the breadth of the food system. From those, more than 50 programs, projects, and initiatives were prioritized and implemented. Several of those spawned even more opportunities which aren't represented in this graphic. Stories in this publication will touch on many of these projects. Below, a full picture map of the work:



The Food System Resiliency Table:

Food leadership, policy, and practice from the ground up

Ashlee Cooper, Manager, Our Food Future and Kate Vsetula, Director of Community Programs and Development, Guelph Community Health Centre

The COVID-19 pandemic magnified systemic risks, fragilities, and inequities in our global food system. Suddenly, everyone in our local community was concerned about accessing the foods they rely on for health and wellbeing. In response, Our Food Future laid the groundwork to support the community, the City of Guelph and County of Wellington to meet local food policy challenges and play a more proactive role in developing a sustainable, resilient, and equitable food system.

A small group of local food system champions worked alongside Our Food Future to create the Food System Resiliency Table (the Table), a unique regional food policy and programming working group. The Table is a place where community leaders work together to:

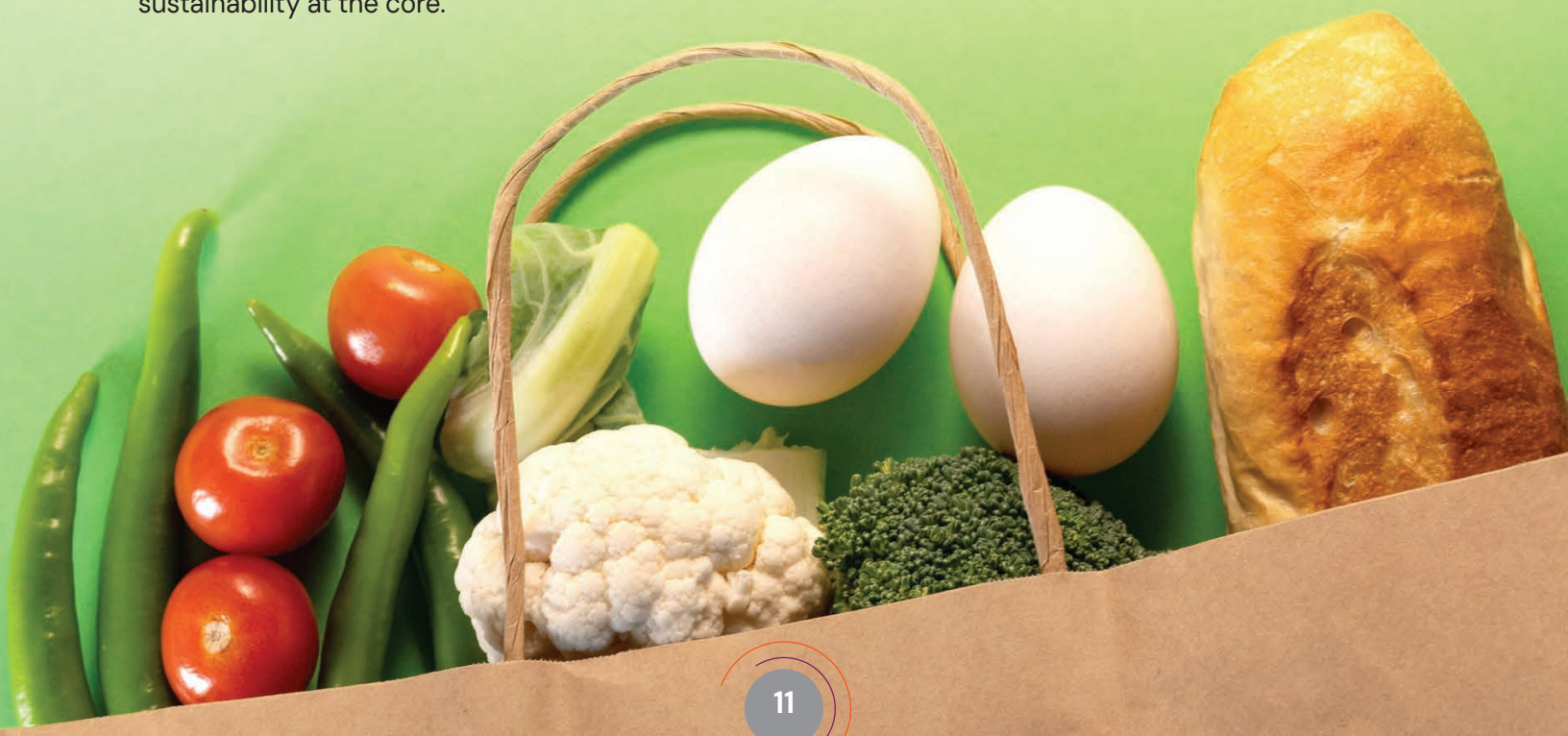
- Learn lessons from the pandemic and resist the attempt to return to business as usual;
- Continue building and supporting a food system transformation that builds resilience at all levels;
- Ensure that diverse groups of people are leading from their lived experience and active in building a resilient food system for all; and to
- Support the transition to a circular food economy that is designed with equity, prosperity and sustainability at the core.

Since January 2021, the Table has built strong relationships with over 20 active participants. Members represent a diversity of lived experiences and rich connections throughout the regional food system. We've welcomed new members, hosted public meetings, shared resources, problem solved, and discussed a range of issues.

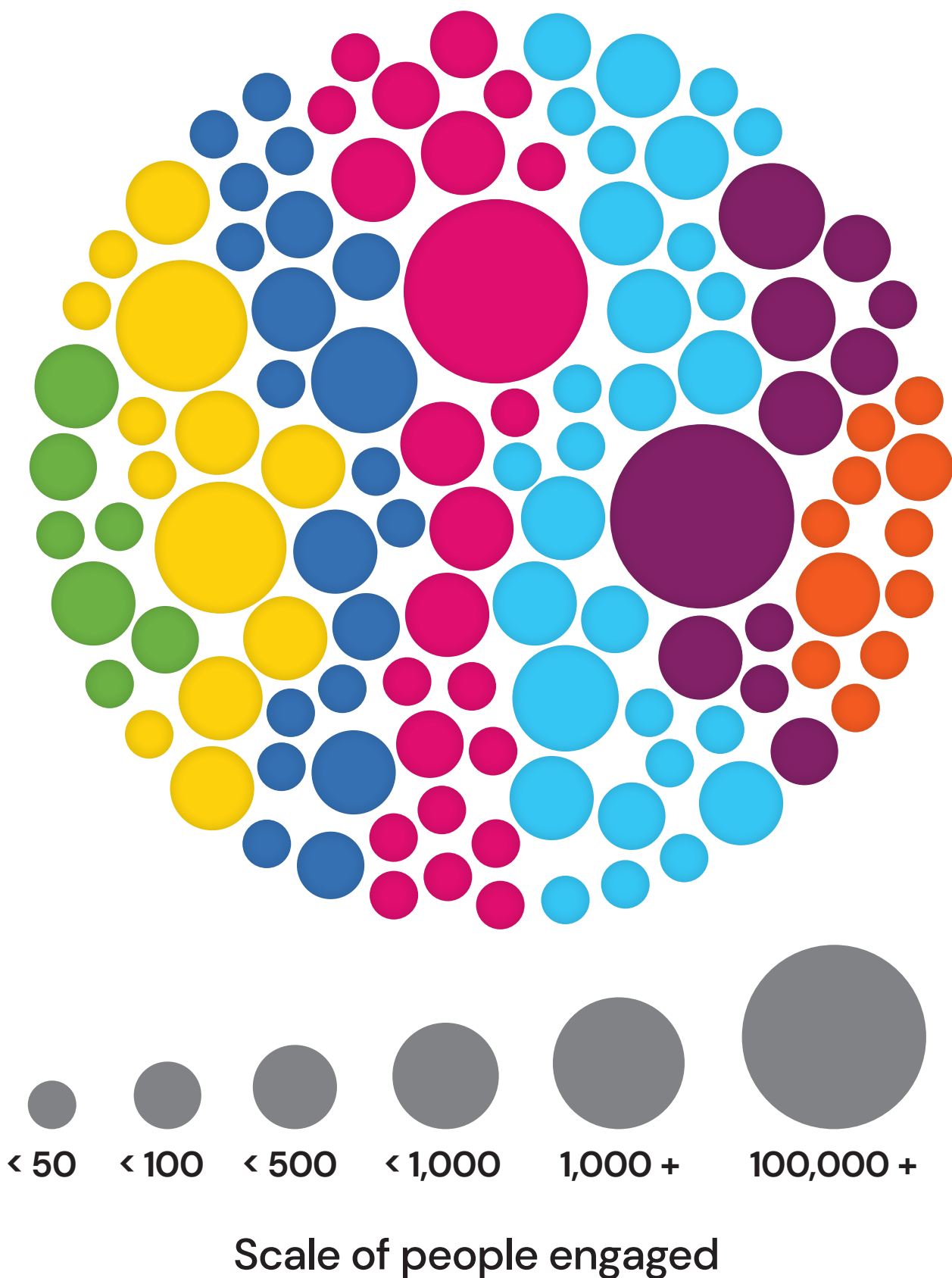
A key project of the Table has been the revival of the 2011 Guelph-Wellington Food Charter and Toolkit. This award-winning document brought together over 150 stakeholders to rally around a shared vision for a better food system. Throughout 2022, the Table worked with graduate students from the Arrell Food Institute to generate and draft updated language for the newly launched Guelph-Wellington Charter for Food Justice.

In 2023, the Table worked to define the governance, operations and working relationship with both City and County councils as it moves out of the Our Food Future office and wholly into the community.

Emergent actions in 2024 will include continued policy work, advocacy, and community engagement.

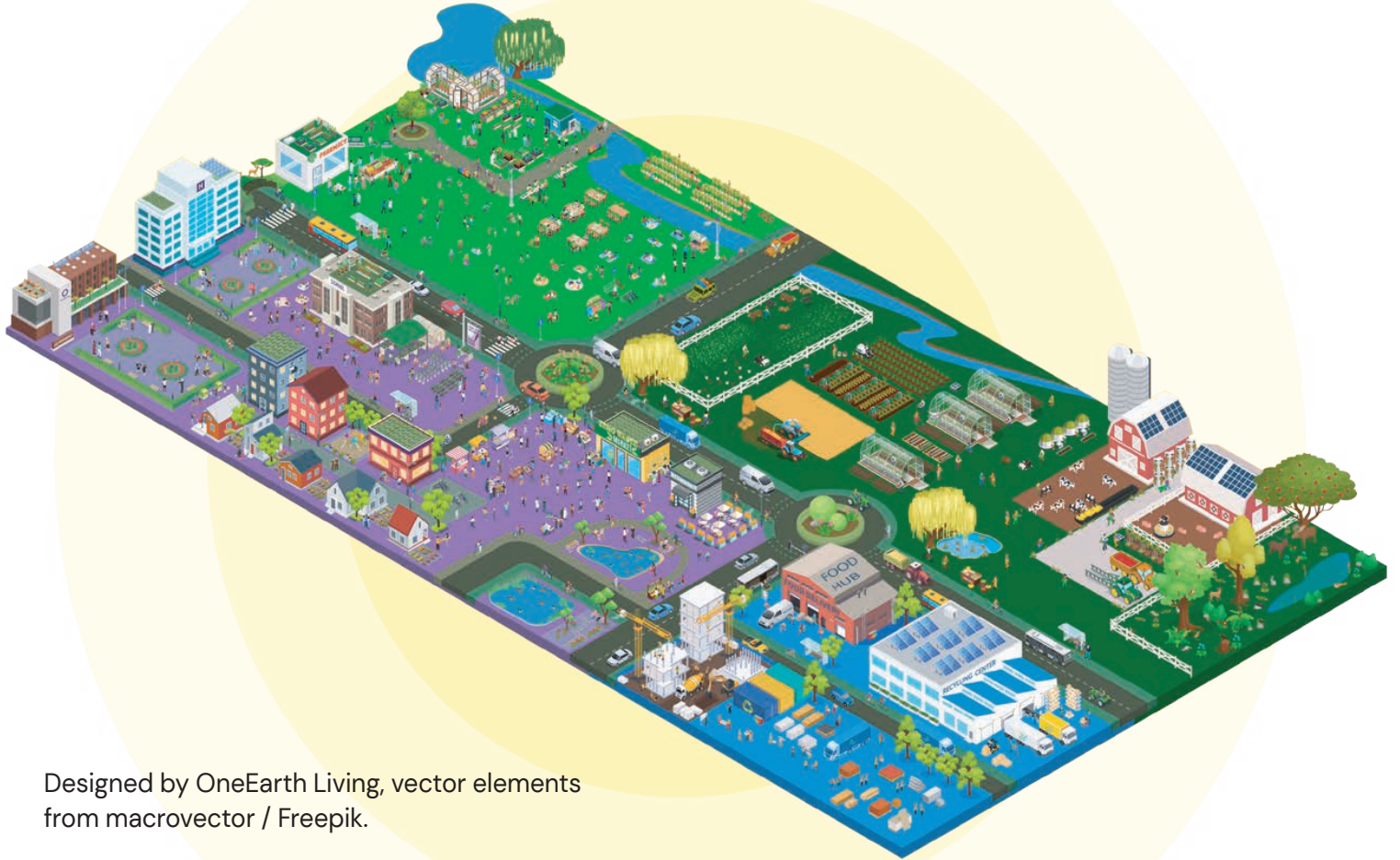


Engagement events by sector



Sector	# Events	# People
Municipal	29	3,580
Public Awareness and Storytelling	22	991,440
Business	21	1,940
International	13	2,550
National and Provincial	11	102,450
Academia	11	650
Agriculture	7	800

Recipe for a Circular Food System



Designed by OneEarth Living, vector elements from macrovector / Freepik.



Municipal solid waste and organics diversion

Municipal solid waste departments play a crucial role in helping residents divert organic waste from landfill and create a waste-conscious culture among residents. [Learn about Wellington County Organics diversion](#) and City of Guelph [Solid Waste Data and Technology pilots](#).



Local food rescue infrastructure

Social enterprises can be equipped to provide core local food infrastructure, offering programs that enable innovative food access, food rescue, and businesses incubation. [Learn about Groceries from The SEED](#) and [Community FEWD](#).

Although the food system is globally connected, every place has diverse food cultures, economies, and ecologies. Our circular food economy initiative in Guelph–Wellington has shown us the importance of understanding the diverse resources, skills, and infrastructure that make our region unique. On our journey, we discovered some key ingredients that have helped connect and catalyze food system transformation by increasing access to affordable nutritious food, regenerating natural resources, and gaining value from wasted food.



Food security collaboration

There are significant benefits in building relationships, collaborating, and sharing resources to improve community access to affordable, nutritious food. [Learn about the Harvest Impact Fund.](#)



Waste-to-value innovation and testing

Innovators want to turn waste into valuable products and services. This requires resources to develop their ideas, connect with collaborators, and access real-world testbeds. [Learn about how social enterprise drive circularity and how COIL supported hundreds of circular innovators.](#)



Innovative and regenerative food production

Local food production can regenerate the health of the soil and provide nature-based solutions. [Learn about farmers' role as ecosystem service providers.](#)



Data and insights to create a circular culture

Research and new technologies can generate real-time data on material flows so we can make better business choices that are unique to our food environment. [Learn about Food Waste Flow Study, the Food Environment Assessment and Motivations for Lighter Living research.](#)



New waste diversion services for businesses

Businesses face significant barriers to food waste diversion such as cost and lack of regulatory requirements. New service models are needed to fill the gap. [Learn about the ICI pilot, and COIL's Zero Waste Transformation Lab.](#)



Engaged communities

Engaged residents can lead the way to a more resilient, just, and climate-positive food system. [Learn about Our Food Future's community agriculture projects and the Food System Resiliency Table.](#)

Launching a companion initiative to support business innovation



Circular Opportunity Innovation Launchpad

Circular Opportunity Innovation Launchpad (COIL) started as a circular-economy initiative in the Smart Cities Office at the City of Guelph. It grew out of the business focus area of Our Food Future. Beginning their work in the food and environment sectors, the team quickly determined that there was both a significant need — and enthusiastic desire — to embed circularity principles, approaches, and practices across for-profit businesses and not-for-profit organizations.

COIL was officially announced in spring 2021 and development began on its first programs that were launched in late summer of the same year.

The initiative began as an innovation platform and network aimed at developing, proving, and scaling

transformative solutions to shift Canada toward a more prosperous, low-carbon, and circular economy (CE). COIL offered a comprehensive set of programs, tools, and resources to support their goal to broaden and accelerate circularity through enterprises, as well as across supply chains and material streams. Some of COIL's programming included an accelerator, system-change challenge series, upcycling support, incubator, CE-education curriculum, and material flow analyses.

COIL development and growth

To support the growth of the circular economy in more sectors, COIL launched its Zero Waste Economic Transformation Lab. The lab began its circularity-driving work in the construction, renovation, and demolition sector in January 2022, and started work in textiles in 2023.

To address and strengthen the growing link between the circular economy and climate action, COIL launched its Climate and Circularity Solutions Hub

in the second half of 2022. The first effort under this new hub was the Circular Leadership Program — a workshop series for business leaders to develop climate-smart circular solutions to issues identified in their respective organizations.

Initiative funding

COIL receives its primary funding for programs and administration from the Federal Economic

Development Agency for Southern Ontario. The initiative receives in-kind support for corporate services from the City of Guelph, including legal, finance, human resources, etc. Additional funding was provided over the years from corporate partners: Co-operators, Desjardins, Scotiabank Net Zero Research Fund, Skyline Group of Companies, and Maple Leaf.

Additional COIL links and resources: coil.eco; [@COIL_CE](https://twitter.com/COIL_CE) on Twitter.

Signature COIL circular economy programming:

- Activate Accelerator for individual enterprises
- Circulate CoLab systems-change challenge series
- STEP program
- CE 101 education and mentorship
- Program participant networking and support

Key collaboration program partners:



COIL by the numbers:

- Organizations supported:

160+

- Jobs created or maintained:

130+

- Cities represented across southern Ontario:

42

- Products, services or IP developed:

80+

- Corporate funding to advance circular innovation:

\$1,075,000

- Increase in business-acceleration program applications:

391%

COIL success stories

Agápe Farms

Wellington County, ON

agapefarms.ca

Selling locally grown, organic, ethnocultural food on a sliding scale pricing structure, Agápe Trout Lily Farms are working to restore the circular food system through an anti-racist lens by bringing youth together to address food security and food sovereignty. They engage youth from diverse social and economic backgrounds as essential contributors in building a circular equitable, healthy, farm-to-table, culturally appropriate food economy — from seed to consumption.

To address food insecurity in Guelph and Wellington County, Agápe is growing more nutrient-dense food by mixing vertical farming with low-cultivation farming and using polytunnels for extended growing seasons and optimum growing conditions. Their circular economy and regenerative practices include composting, covering crops, growing green manures, crop rotation, enhancing biodiversity, and reducing cultivation.



"Our Food Future provided critical funding to purchase plastic and wireframes to create polytunnels on our farm. These will help us grow crops earlier, create summer shade, and extend our growing season for protection from early frost. All ways for us to increase our food production and support better food access locally."

Tiffany Lauren, CEO

Bug Mars

Toronto, ON

bugmars.com

More bugs, more data, more profit



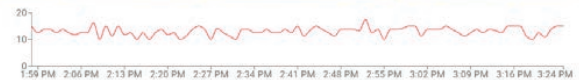
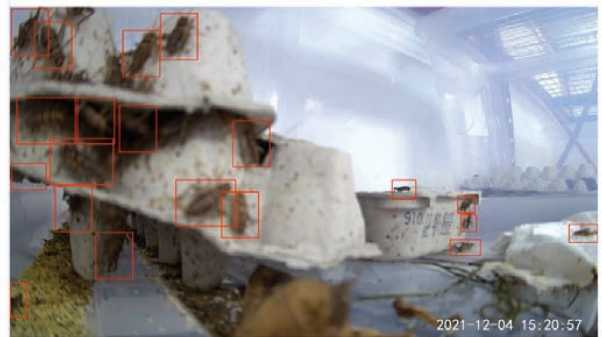
Real-time/Predictive



B2B SaaS

Crickets

Show boxes



Bug Mars is an AI management system for insect farms, a rapidly growing agricultural sector. Their technology solution lowers production costs and reduces the risk of widespread disease and colony collapse in an industry that typically experiences high loss rates and precarity.

With agriculture — and meat production especially — being one of the largest greenhouse gas emitting and resource intensive industries, alternative proteins are a necessary switch to support climate change targets. Tech and data driven solutions like Bug Mars that will reduce costs and increase yields will catalyze further expansion of the alternative protein sector.

"The circular economy has helped Bug Mars expand our reach. People are becoming more aware of insects' role in circular and regenerative farming, and that has helped us to gain traction."

Natalie Duncan, Founder

Friendlier

Guelph, ON
friendlier.org

Friendlier was founded by Kayli Dale and Jacquie Hutchings, two Chemical Engineering graduates who felt it was time to be a little “friendlier” to our planet. It is now Canada’s fastest growing reusable container company. The unique offer of Friendlier’s system lies in their data-driven approach. Each Friendlier container has a QR code that customers scan before returning. The data supports retailers with their market research and behavioural insights about consumer preferences and patterns. Each Friendlier container return renders a quick and easy deposit through e-transfer, making things easier for both the retailer and consumer.



The demand for reusable packaging, containers, and plastic alternatives is skyrocketing — and is now enforced by the federal single-use plastics ban coming into effect this year. Friendlier containers and coffee mugs can be found at restaurants, coffee shops, university campuses, and businesses across the country.

“The circular economy is core to Friendlier and drives forward all business decisions. We know that in order to transition away from a linear economy, the solution needs to be convenient and easy. This is what Friendlier is creating. We are on a mission to simplify the transition from single-use packaging to reusable packaging.”

Jacquie Hutchings, Co-Founder & COO

Greenhouse Juice

Mississauga, ON
greenhouse.ca



Greenhouse Juice and partners (Herbert Labs, SAINA+ Consulting) turned their juice pulp “waste” stream into a new source of revenue and product development through an innovative dehydration solution. This optimization has since led to the creation of their organic Ginger Beer, the brand’s first-ever Upcycled Certified product from the Upcycled Food Association.

Their research has led to collaborations with other COIL companies and additional upcycled product development including kombuchas, pre-made smoothies, and nutrient-dense powders. Greenhouse stands out as a true sustainability leader, integrating circularity across multiple verticals, including experimenting with upcycled product labels.

“The circular economy offers a real opportunity to improve the way you do business by minimizing waste within your services. To make it happen, try to understand who you want to influence, describe the context, define your circular economy idea, learn from the success of others, and do your part.”

*Behnoush Maherani,
Director of Research & Development*

Guelph Tool Library

Guelph, ON

guelphtoollibrary.org

The Guelph Tool Library is on a mission to build community resilience by engaging its members in sharing knowledge, skills, and resources. Located in the Old Quebec Street Shoppes in downtown Guelph, the Library lends out day-to-day items such as kitchen appliances, gardening equipment, and power tools, as well as specialized inventory like arts and crafts or supplies for large events. This stock is coupled with training and workshops such as The Repair Café, the Freehub Community Bike Centre, and a free seed library. Most recently, the Library opened the Circular Store, an opportunity to recycle household goods and purchase secondhand items that would otherwise end up in the landfill on a sliding price scale.

A vibrant circular economy — the ethos behind the Guelph Tool Library — builds community, saves space, and extends the life of our “stuff”. In an economy that is otherwise heavily reliant on resource extraction and energy-intensive and polluting processes, reducing our consumption, and sharing what we have is essential to curbing climate change.



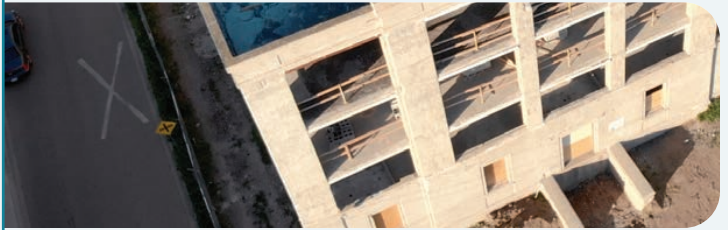
“The Circular Economy has played a big role in the direction of the Guelph Tool Library and the projects we support. We are always looking for ways to extend the life of items through sharing, repairing, and re-homing so many of the things we take for granted on a daily basis.”

*Stephanie Clarke,
Communications and Outreach Coordinator*

National Construction, Renovation & Demolition Projects

Canada

www.coil.eco/natlchallenge



In March 2023, COIL launched the National Construction and Demolition Circular Innovation Challenge to tackle the challenges of waste, pollution, climate change, and biodiversity loss in Canada. Generously funded through The Co-Operators, and run by the Zero Waste Economic Transformation Lab, four projects received funds and mentorship for their new, innovative, climate-smart circular ideas in the construction, renovation & demolition (CRD) sector:

1. Adaptis’ team will be looking at a tech solution to optimize material reuse and reduce waste generation during demolitions. Adaptis is partnering with METAFOR, Triovest, and the University of Waterloo for their project.
2. Biosphere Institute of the Bow Valley’s team will be looking at source separation solutions on construction sites with redesigning bins and focusing on education and human behaviours to encourage separation. Biosphere is partnering with the Bow Valley Waste Management Commission, Bow Valley Builders and Developers Association, and Clean Sweep Waste Removal for their project located in Canmore and Banff, AB.
3. Good Roads’ team will be researching the use of Reclaimed Asphalt Pavement (RAP) for municipal gravel road applications. Good Roads is partnering with Municipal Engineers Association and the University of Waterloo for their project.
4. ReOsiris’ team will be developing a Low Energy Sorting System (LESS) as a new process for the reclamation of construction and demolition waste. ReOsiris is partnering with Assinck Ltd. and Cambrian College.



POWERED BY PEOPLE

People and planet driven solutions prioritize food security
and community resilience through upcycling and food redistribution.
Get to know the programs near you!



OASIS FOOD HUB

To learn more about calculation methodologies, visit [Appendix IV, page 72](#).



Meals distributed to
community
members

169,799



Individuals with increased
access to affordable,
nutritious foods

20,572

Our Impact 2020-2023



Stakeholders
engaged in
our programs

1,255



Value of in-kind
contributions

\$2,234,123



New products and
services from
diverted food waste

181



Value saved and/or
earned by shifting to
more circular
business practices

\$2,703,210



Business collaborations
strengthening the
circular supply chain

310



Tonnes of GHG
Emissions prevented

168,788



Acres of land piloting
regenerative
agriculture practices

320



Circular Jobs
from COIL
programs

287



**Circular Opportunity
Innovation Launchpad**



New funding
leveraged

\$23,545,257



Value of supports
for businesses and
social enterprises

\$4,079,255



Value of edible
food recovered

\$2,054,915



Tonnes of food
waste prevented
by businesses

5,077



Value of
supports
for NGOs

\$3,501,866



Tonnes of food waste
diverted, upcycled
or recycled

84,860



Funded
community
food projects

93

Milestones

Chronicling our path to circularity in Guelph and Wellington County

Nov. 2017



Government of Canada challenges communities to develop bold ideas to improve the lives of residents using data and connected technology. Over 200 ideas are submitted to the Smart Cities Challenge.

May 2019

Guelph-Wellington is awarded a top prize: \$10 million to rebuild the region's modern circular food economy with three goals: 50 new circular businesses, 50% boost in economic impact by reducing wasted food, 50% increase in food access.

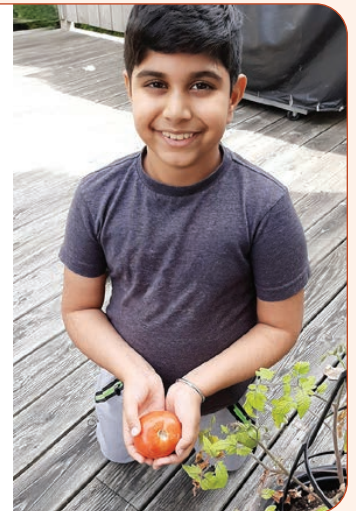


June 2020

Harvest Impact social fund launches. The fund would go on to inject millions of dollars into business and social enterprise innovation, and is now an established community investment fund with no sign of slowing down.

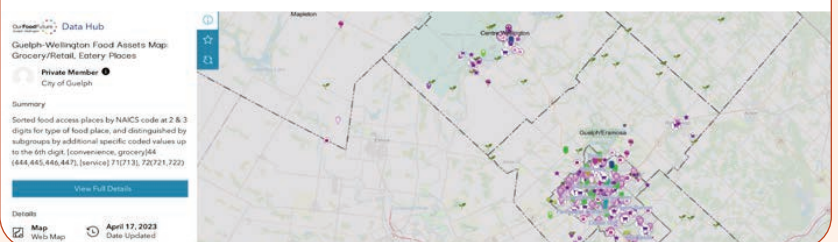
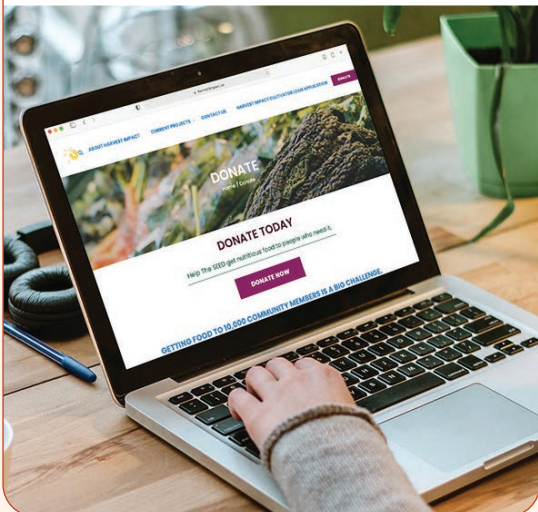
Mar. 2020

COVID-19 strikes and Our Food Future pivots with Grow Back Better, a 10-point plan to guide community programs and business supports. Programs including helping kids learn to grow food at home. Our Food Future would go on to be named a top recovery project in Canada by Future of Good.



Nov. 2020

Food Future Data Hub launched to provide access to dozens of centralized, robust data sets mapping everything from food security and wasted food hotspots to businesses focusing on circular practices.



April 2021

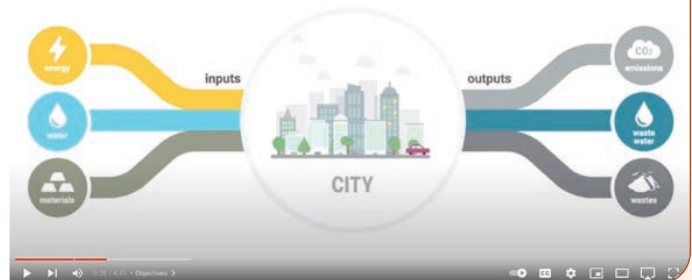
Responding to immense interest amongst food businesses, the Circular Opportunity Innovation Launchpad (COIL) launches as a parallel program to Our Food Future with \$5.5 million in additional funding from FedDev Canada.



Circular Opportunity Innovation Launchpac

May 2021

Wasted Food Flow Material Study releases, drawing on first-in-Canada data modeling to identify waste hotspots across the regional food system. The model draws worldwide attention and is adopted by City of Halifax Regional Municipality in 2023.



Sept. 2021

County of Wellington launches Experimental Acres to support local farms introducing regenerative agriculture techniques. After a successful trial, the program expands in 2022 in Wellington, and is adopted in Grey and Dufferin Counties.



Jan. 2022

The Co-operators commits \$350,000 for COIL to launch the Zero Waste Economic Transformation Lab. The announcement is the first of several private sector investments in Guelph-Wellington's circular economy work.



April 2022

Upcycled Certified™ comes to Canada to give consumers a clear mark that highlights certified upcycled ingredients, products produced with surplus food or food by-products, and have a positive impact on the environment.



Aug. 2022

Spark Grants support 11 innovative local food access projects across Guelph and Wellington County, funding ideas ranging from food skills training programs to transforming a school staff room into a commercial kitchen to support neighbourhood cooperative food system.



Nov. 2022

The work of Our Food Future is highlighted at the COP27 conference in Egypt, one of several high-profile events that bring the work of Our Food Future and COIL to a global audience.



Jan. 2023

COIL announces completed programs, mentoring and funding for more than 100 circular businesses in its first year, doubling the project's initial goal and ultimately supporting nearly 200 circular business ideas and projects.



Sept. 2022

Reimagine Food launches a year-long community engagement campaign, hosting events and activities such as Sovereign Soil film screening, PlazaPOPs plant and herb garden in an urban parking lot, and Future Food Visions, an audio experience series about food security created by University of Guelph theatre students.



Feb. 2023

Our Food Future launches three action plans that offer a comprehensive framework and go-forward priorities for the circular food economy, addressing critical issues including climate change, wasted food and food access.



Mar. 2023

With scalability and expansion into other communities a priority, COIL launches its national construction, renovation, demolition innovation challenge with collaborators in BC, Nova Scotia, and Quebec — funded by Co-operators and Skyline.



Apr. 2023

Our Food Future announces second round of successful community agriculture microgrants, providing funding in total to more than 30 community-led ideas designed to increase access to growing, distributing and celebrating local food.



May 2023

Our Food Future is featured at the Circular Economy Hotspot Conference in Dublin, and Guelph-Wellington is announced as the host community for the 2024 Circular Economy Hotspot Conference, the first time Canada will welcome the global conference.



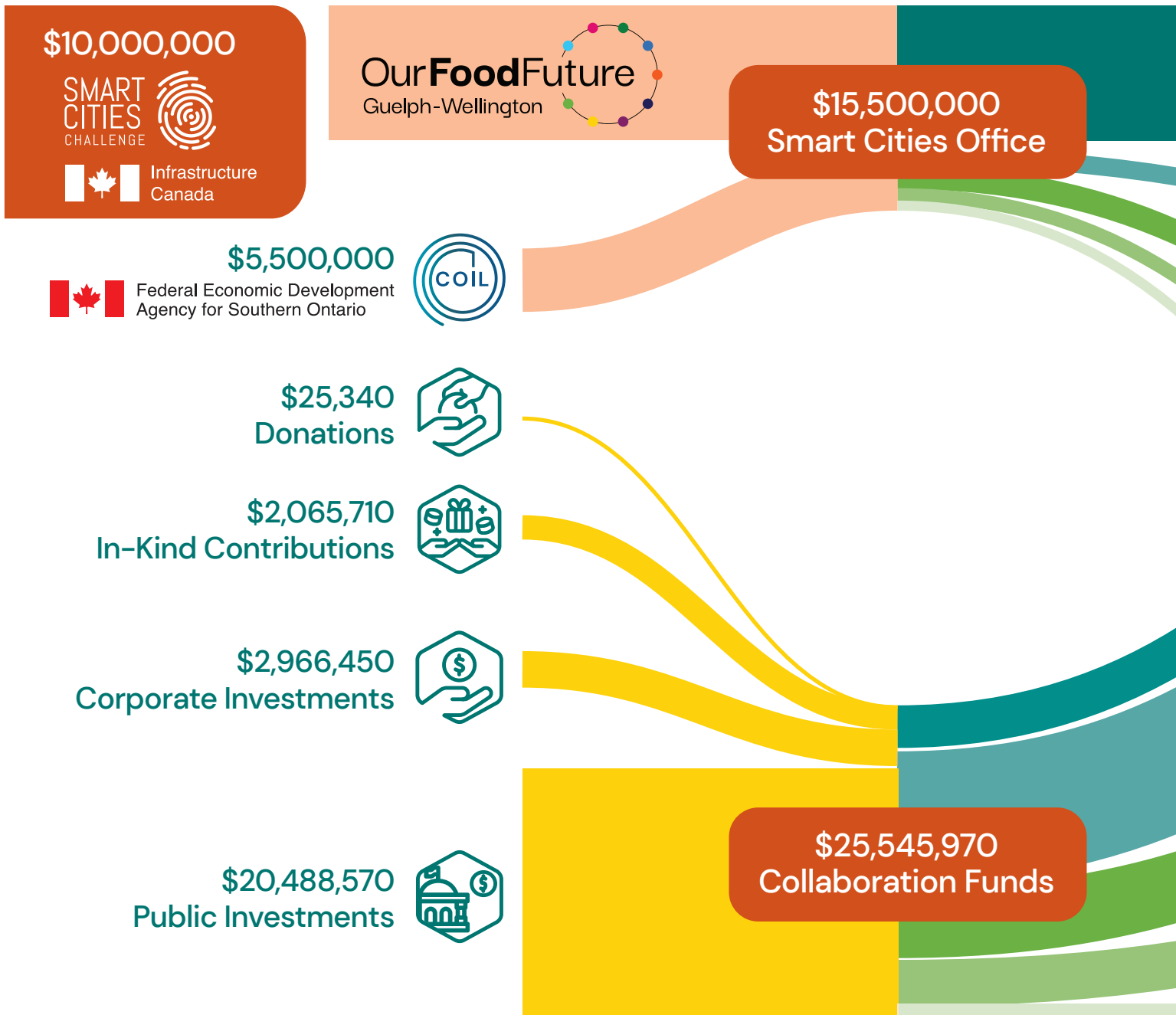
Circular Economy Hotspot
Guelph Wellington 2024

The work lives on...

Although the Guelph Smart Cities Office closes in December 2023 at the conclusion of funding, the stage has been set for longer-term impact through the sharing of Our Food Future's learnings, a legacy [website](#), and several continuing initiatives. Among them:

- The County of Wellington will still operate its Smart Cities Office, working with County departments to bring circular insight to local policies, and leading initiatives including the Experimental Acres regenerative farming program.
- The Food System Resiliency Table updated Guelph-Wellington's [Charter for Food Justice](#), which describes our community's vision and values for a just and sustainable food system.
- The Arrell Food Institute at University of Guelph has established a Community Food Lead to increase strategic connection between food access organizations across Guelph and Wellington County, lead and support innovative approaches to community food access.
- COIL published "[Advancing Circularity: Investment Opportunities in the Circular Economy](#)" to support the growth of climate-smart, circular solutions across Canada by connecting over 25 investment-ready Ontario businesses that are leading circular innovation with funding bodies.

Funding + collaboration = impact





\$11,391,010
Business
Acceleration



\$12,454,120
Climate Smart
Agriculture



\$8,622,190
Food Access



\$4,526,730
Waste Reduction
and Diversion



\$1,547,610
Zero Waste
Economic Transformation Lab

\$41,045,970
Total Investments

OLD MACDONALD HAD A

CARBON SINK

Farmers grow climate solutions through regenerative agriculture techniques and other strategies.

ecowool

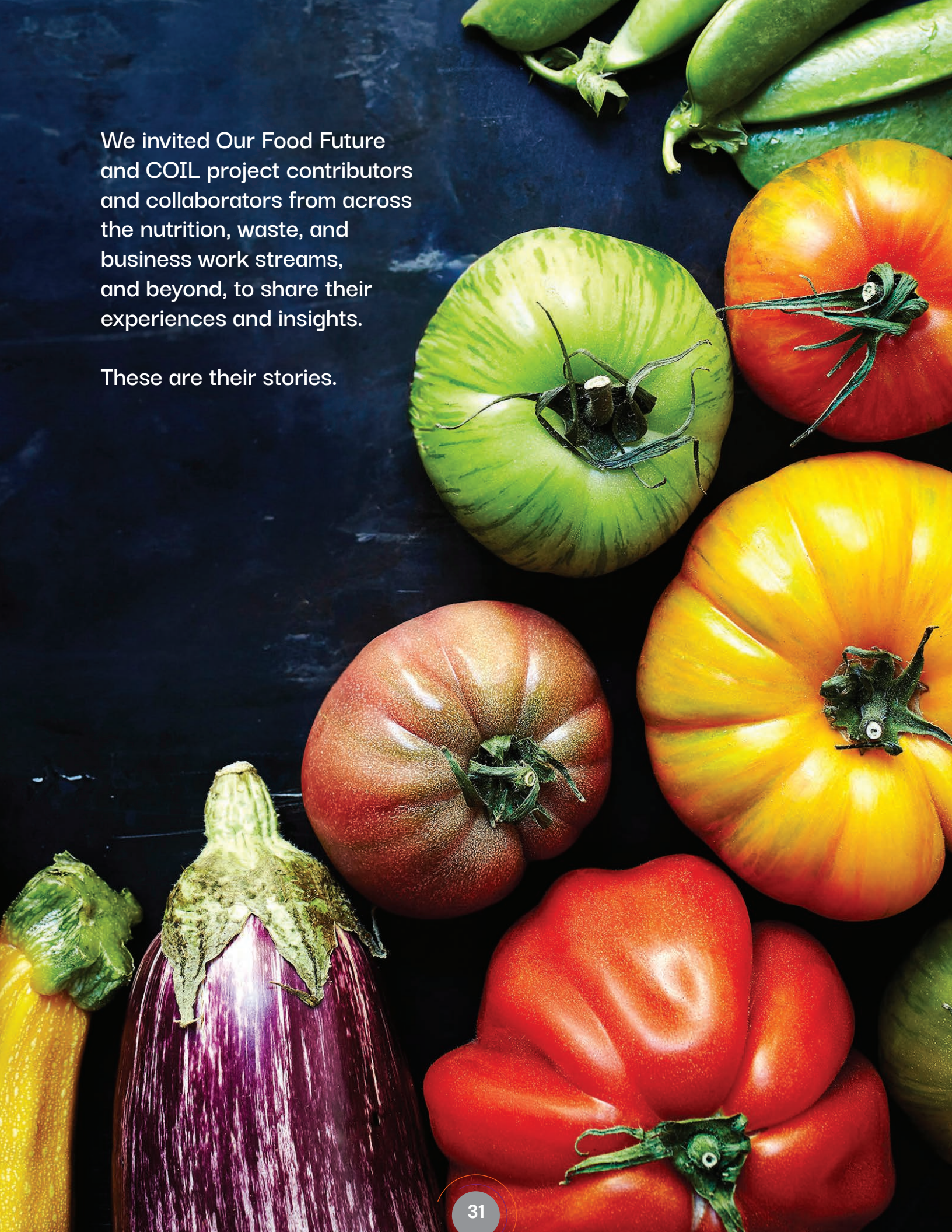

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FARM • CIDERY

LUCKY BUG
FARM



We invited Our Food Future
and COIL project contributors
and collaborators from across
the nutrition, waste, and
business work streams,
and beyond, to share their
experiences and insights.

These are their stories.



Socially financing our future

Julia Grady, Executive Director of 10C Shared Space



Imagine that you are an enterprise with a project that can achieve strong social or environmental outcomes, you have identified sustaining revenue streams, have a strong leader or team, but lack key resources to readily move forward.

What if financing and individualized business-related supports could help unlock your social impact? These “what ifs” are what Harvest Impact seeks to achieve for the most socially-oriented circular food economy enterprises in Guelph-Wellington and across Southern Ontario.

As a thriving social change hub, 10C’s mission is to foster the conditions for collaboration on social, environmental, cultural and economic wellness. Working within five interconnected themes of placemaking, community engagement, social enterprise, social finance, and sustainable food systems, 10C’s ultimate goal is resilient and sustainable communities.

Today, 10C activates 46,000 square feet of social purpose real estate at two properties, including

its main hub at 42 Carden Street and the Guelph Farmers’ Market facility, which 10C assumed management of in 2022. 10C hosts over 1,800 events, meetings, and trainings per year with social and environmental changemaking content provided by 10C and over 200 members, and engages over 25,000 visitors per year. Together, with social lending projects and impact measurement and management through SDG Cities, 10C offers a portfolio of services to enterprises leading social and environmental change.

As one of the flagship projects of Our Food Future, 10C launched Harvest Impact in 2019 to create a community-based social lending fund supporting food, farm and environment enterprises engaging in circular economy transition. Since 2019, through Harvest Impact, the 10C team has built technical expertise as a social finance intermediary able to provide wraparound enterprise training, ecosystem connection, and relational lending of \$2,500 to \$50,000. To date, Harvest Impact has placed 36 loans totalling \$373,000 across southern Ontario. Of these businesses, 70% are led by women or

gender-diverse entrepreneurs working on exciting projects that advance equity and sustainability.

Harvest Impact illustrates how social financing can help enterprising organizations to create community impact. Harvest Impact clients have accessed lending to purchase equipment, hire staff, pre-order inventory, conduct research, improve branding and packaging design, and make other essential investments in their enterprises to drive sustainability and create change.

Through the Our Food Future project, the Harvest Impact team provided intake and fund management to support approximately 150 projects to advance through Circular Opportunity Innovation Launchpad (COIL). A circular economy is a source of economic opportunity, which was evident by the uptake from applicants with for-profit models. A circular economy also benefits everyone, including the land, and these shared benefits must be fostered as fueling transformation in the social benefit sector. As a leading non-profit initiative, IOC believes that now is the time for non-profits to also be more enterprising as the engines of social, environmental, and economic change. Fortunately, through Our Food Future and COIL there was also participation from non-profit, co-operative, and charitable enterprises. IOC's Harvest Impact team was able to provide direct support and mentorship to non-profit and charitable projects, including Branching Out Support Services (below) and Community FEWD (see detailed story, page 35).

Within Harvest Impact's portfolio are existing and emerging ventures including:

Beck's Broth – Beck came to IOC's Nourish kitchen in 2021 to begin processing beef bones for bone broth as the base for nutritious hot chocolate. Within the first year, the business outgrew the shared kitchen and with developments of new products, such as a cold brew coffee beverage, required a more dedicated space for production. Beck also participated in the COIL Activate accelerator in 2022. Beck's business has been further strengthened by financing from Harvest Impact which will support the development of a shelf-stable product line for distribution nationally.



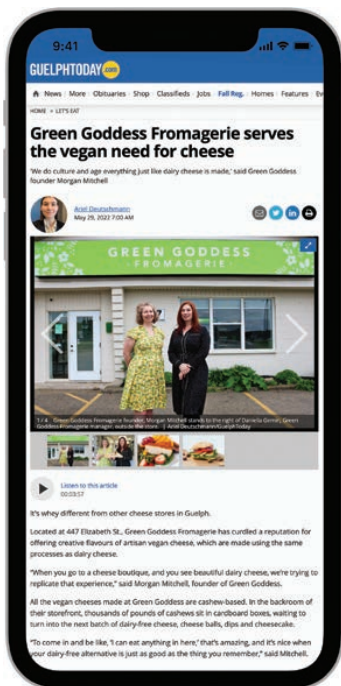
"The information and resources (like mentoring) available through Harvest Impact are invaluable to business owners who want to work better. Also, the networking and the people that you meet! Having that network, the connections, and the constant inspiration is really important."

Beckie Prime, Founder, Beck's Broth

Branching Out Support Services provides creative, community-based care for individuals with developmental differences. The Granola Project is their leading social enterprise, created in the CommonFare kitchen, a social enterprise that focuses on food and food-related capacities to launch employment skills and opportunities, where granola is handmade in loving batches by the day program team for adults with neurodiversity.

"We've created jobs for neurodiverse people in Dufferin County and that's pretty hard to come by. So at this point in time, it's two (jobs) and we hope to see that grow to four by the end of the year and forward from there. That's been incredibly important because The Granola Project is contributing to the social capital of our community. Because it's popular here, people like it, it's a "good vibe" kind of project. But we've got neurodiverse faces all over the place. And so the advocacy work that's come through this, I think is the most important thing we have brought forward."

Kimberly Van Ryn, Harvest Impact client, Founder, Branching Out Support Services and Commonfare Kitchen.



Green Goddess Fromagerie –

Through participation in the COIL Activate Accelerator program in 2022, Morgan was able to scale up her business using an automated unfiller to more efficiently fill cheese products packaging. Financing through Harvest Impact has supported further efficiency and R&D to explore alternative packaging options.

These projects are just a few of more than 150 projects emerging from Guelph-Wellington's Smart Cities circular economy work. To support lasting change, Harvest Impact is on a path to develop a sustaining fund of \$3-10M that can continue to provide the types of supportive enterprise financing needed to foster growth of both the non-profit and for-profit enterprises in the circular transformation sector. The Harvest Impact fund will be developed through a blend of capital from foundations, individuals, business and government, and will continue to invest in leaders like Kimberley, Morgan, and Beck who are leading the way towards a more sustainable and just circular economy.

Knowledge, training and ecosystem supports – including funding and social financing – are an important part of ensuring that Canada's circular economy social entrepreneurs have the tools they need – to lead the changes that our communities need. Harvest Impact is working to meet this moment.

More information: harvestimpact.ca

Harvesting insights relating to demand for capital



Harvest Impact's goal is to invest in circular economy businesses and these small and medium sized enterprises are often led by equity-deserving entrepreneurs who don't always qualify for financing through mainstream financial institutions. Considering these barriers, what is the demand for capital to build circular regenerative food and farming practices in southern Ontario?

In 2023, Harvest Impact reviewed its investment deployments and deployed a capital demand survey to enterprises within its existing program network. Among 49 respondents there exists

immediate demand for \$2.4 million in lending capital and further demand over the next five years for \$18 million in small business financing. Those who feel they cannot access mainstream financing indicate an immediate demand for \$500,000 and a further demand over the next five years for \$5.7 million in small business financing.

A powerful insight regarding those experiencing systemic barriers emerged. When looking at differences between enterprises with other options for financing versus those with limited options, those companies that enjoy other options account for more of the projected capital demand at a ratio of nearly 4:1 in the immediate term and nearly 2.5:1 over the coming five years. This finding reinforces Harvest Impact's core belief that social finance must be concerned with meeting the needs of entrepreneurs facing barriers to accessing capital.

Improving community food access with circular innovation

Brendan Johnson, Executive Director, Guelph Neighborhood Support Coalition with contributions from Chef Yasi Zolutuna, founder of Community FEWD

Photo: Chris Tiessen, Toque



"I thought it was a good idea. I've worked in food insecurity for a long time and this works," said Barb McPhee, Manager, North End Harvest Market. She's talking about Community FEWD (Community Food Equity With Dignity), a chef-led initiative offering take-home meals for free or by donation. She was so convinced she proposed the market as a pilot location.

On May 11, 2022, CF creator chef Yasi Zorlutuna served Italian meatballs, pasta with a veggie loaded sauce, Turkish white bean stew, basmati rice, and a citrus carrot slaw to some 40 marketers. "People are hesitant at first, but then they see the food," said Barb. "It's not a hot dog, it's nutritious food that they wouldn't ordinarily get."

High-quality food is just one of CF's guiding principles. This mobile food security and social enterprise initiative centred on dignity, quality, and accessibility diverts high-quality surplus food from landfill. "CF uses circular economy principles," explained Yasi. "I'm connecting with existing food rescue organizations, sourcing 99% of our ingredients through The SEED, Second Harvest, the Guelph Food Bank and other food security groups. We provide a place to bring surplus food that needs processing before being consumed."

For Yasi, bringing meals to people is part of food equity. "We bring the food right into different communities, instead of asking people who are already marginalized and may not have cars or the time to take transport to travel extensively."

Providing meals to all underscores CF's emphasis on dignity. "We offer meals for free to anyone, no questions asked," said Yasi. "Those with means can contribute financially if they'd like to help sustain the program. And not everybody wants something for free — we so appreciate the donations of \$1 and \$2 — everything helps. It's about breaking down the divisions that create so-called 'poor people's food' and everybody else's. I want to question that, and to create something that exists outside that binary. I think, why is this food being donated only to poorer people? Everybody should be eating it."

Volunteers are CF's secret sauce. Huge quantities of unsold and unharvested food surpluses end up wasted because they need to be processed quickly in a food-safe manner. "Our volunteers address the gaps by providing the labour to, say, break down garlic or cherry tomatoes," explained Yasi. "We've built a system that processes, prepares, and then distributes these foods quickly and efficiently." A welcome

by-product is the supportive environment that comes with bringing together volunteers across cultures, ages, and financial backgrounds.

Since May 2022, CF has served 20,000 meals in seven Guelph neighbourhoods identified as being in need. "We're very grateful for the financial and other support we received from Our Food Future," said Yasi. "They funded a community leader with a vision that fit into the circular economy."

Looking ahead, Yasi sees CF in a larger industrial kitchen where more products can be processed efficiently so that more meals can be served. "We're creating a model that other municipalities can use that challenges a prejudicial system that differentiates food for poor people as being substandard. FEWD is shifting this view by working with resources that are enjoyed by all and building resilient networks for local food access."

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Importance of place-based test beds for circular innovation

Jo-Anne St. Godard, Executive Director of the Circular Innovation Council



24-Month Outcomes from the Guelph-Wellington Wasted Food Pilot

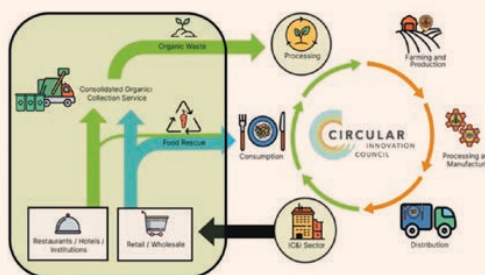
Lisa Waldick, Senior Program Officer, Agriculture and Agri-Food Canada; Maggie Bain, IC&I Pilot Coordinator, The SEED; Tom Armitage, Operations Manager, The SEED

To enable collaboration and cut through the complexity of circular solutions, Circular Innovation Council (CIC) has taken a leading role trialling innovative, place-based, multi-stakeholder circular solutions, which has proven invaluable.

CIC partnered with Our Food Future and COIL on a collective industrial, commercial and institutional (IC&I) sector food rescue and waste diversion pilot. It simplifies food rescue and diverts organic waste by developing shared collection services for neighbouring IC&I businesses. It reduces cost, waste, and GHG emissions while increasing access to nutritious food, and enhancing circularity in the food system.

The connections and relationships enabled by our collaboration were essential, providing connections with business, and institutional leaders, as well as technology innovators to advance IC&I organic waste data collection. It is a reminder of the value of partnership in this work.

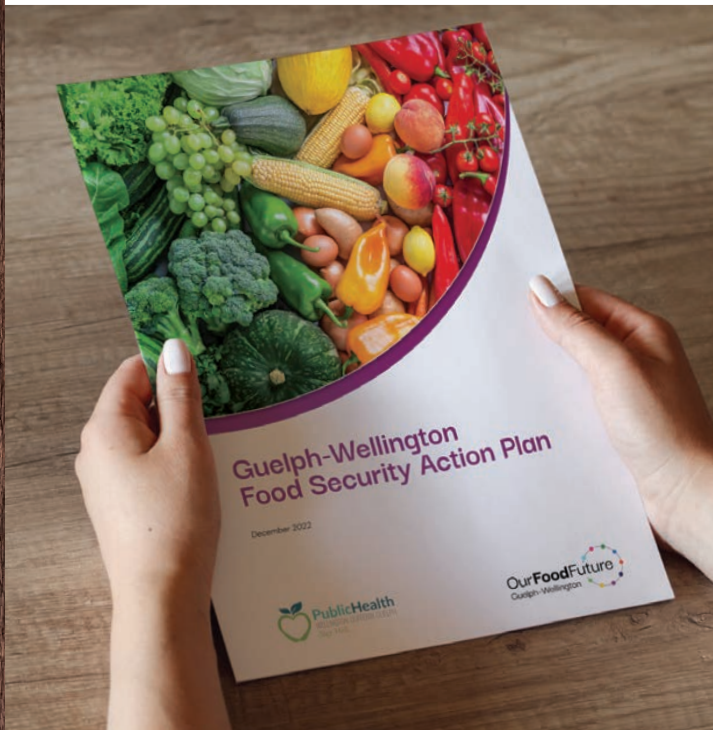
The place-based pilot has delivered impact over just 24 months. Fifty-three IC&I participants diverted 380 tonnes of organic waste and recovered \$214,800 of surplus edible food — that's more than 62,000 meals made available to those food insecure.



Flow Chart indicating the process of the Circular Innovation Council's Circular Food Recovery and Waste Diversion Pilot in the IC&I Sector. CIC partnered with The SEED, a food access social enterprise, to create a locally-owned solution.

Food access and Public Health — Learnings from Our Food Future

Dr. Nicola Mercer, Medical Officer of Health and CEO, Wellington-Dufferin-Guelph Public Health



Guelph-Wellington's Smart Cities project, Our Food Future, is a vital first step in developing a circular food system. This successful cross-community collaboration has made our region a global leader in circular food economies, benefiting the community and serving as a model for other municipalities.

Since 2019, Wellington-Dufferin-Guelph (WDG) Public Health has used Smart Cities funding for dedicated staff to lead projects aimed at increasing access to nutritious foods in the region. We led research activities to better understand local food security, allocated funding to community-led interventions designed to improve food access, and co-created a Food Security Action Plan to outline strategic priorities for the future.

Nutrition plays a major role in growth and development, mental health and preventing lifestyle-related chronic diseases. We believe that

access to nutritious food is essential to fostering healthy eating patterns that meet nutritional requirements at every stage of life. Our work aspires to create a future where all people have sustained physical and economic access to sufficient and nutritious food that meets their dietary needs and food preferences for an active and healthy life. Access to nutritious food also aligns with our shared goals to reduce inequities created by social determinants of health.

The project has also had a demonstrable impact on food access, seeing more than 88,064 meals prepared and delivered to community members and over \$636,402 worth of food distributed to community members at a reduced rate or free of charge. Over \$350,000 was distributed to fund small-scale food access initiatives, expand a fresh food prescription program, encourage conversations about food equity and build relationships in Wellington County. Almost 8,000 residents reported increased access to affordable nutritious food through more than 45 funded food access and community agriculture programs.

The key insights from the Nutritious Food Workstream (NFW) suggested positive results occurred when partners:

1. **Prioritized projects that both increase access to nutritious foods AND offer additional social benefits.** For example, the *Food Equity With Dignity* project supplied high quality nutritious foods in a dignified way by upcycling food that would have otherwise been wasted. At the same time, it also provided opportunities for community members to connect with their neighbors, helping to increase social connection and build social cohesion.

2. **Established and tested innovative funding models that benefit communities.** A group of community leaders and organizations came together to participate in the Co-Lab Funding Process. They were given funding and worked to develop shared ideas that best serve their communities. Through a collaborative, open process, they co-created seven dynamic solutions. Examples include expanding community markets that sell fresh food on a sliding price scale and increasing the accessibility of farmland and commercial kitchen space to support local food initiatives. The process demonstrated how collaboration and the prioritization of new ideas can lead to incredible outcomes.
3. **Built multi-sectoral collaborations.** One reason *Our Food Future* was successful is it acted as a nucleus for all circular food activity, allowing many

sectors in Guelph-Wellington to build connections and relationships. This coordinated work has led to huge economic, environmental and social benefits. The five-year *Our Food Future* project was completed in just four years, creating global leadership during a global pandemic, clear proof that amazing work can happen when people work together.

Our Food Future has accomplished so much. While the end of this funding signals the end of dedicated agency resources, WDG Public Health will use the lessons learned from this project to inform broader health promotion work in our community. It will be critical for community partners to continue to work together to ensure everyone has access to nutritious foods and that we continue to align this work with the broader circular food system.

Collaboration and Connection: A Food Access Case Study

Courtney O'Neill, Nutritious Food Coordinator, Centre Wellington Community Foundation

In June 2022, the Centre Wellington Community Foundation brought together stakeholders to address food access issues in the community. Since then, more than 20 organizations have continued to meet regularly. A coordinator is in place thanks to funding from *Our Food Future*, and there is a strengthened collaboration dedicated to feeding more people in the community.

Bringing stakeholders together through a Community of Practice offers a dedicated time, space, and conversation focused on increasing food access, and this allows partners to share updates, increase knowledge, create partnerships, and – most critically – build trust.

Trust enables the collective to identify opportunities for shared resources, enhanced service delivery and partnered grant opportunities to increase food access capacity in the community. Regular meetings with formal and informal conversations allow organizations to understand each other and their clients better,

and this challenges everyone to think about food access more holistically. The collective approach has led to new free meal services and pop-up markets, more children and youth accessing nutritious foods, education opportunities for volunteers and new grant opportunities.

Crucial to the success of food access projects is understanding the unique challenges that organizations or intended clients may experience in accessing or delivering food support in a rural community. Bringing in partners from different sectors like food procurement, transportation, and community services ensures we approach the problem from many angles. Most importantly, individuals with lived experience who bravely join our conversations help us create more effective and dignified programs.

As Dr. Mercer notes, nutritious food is critical – yet food insecurity rates continue to rise. For the Community of Practice, this is a challenge that is best met by gathering together to gather strength.

Activating community-led solutions to food insecurity

f.u.n Community Advisors in collaboration with Jess Haines, PhD, RD, Professor of Applied Nutrition, University of Guelph, and Nayssam Shujaiddin, Community Program Lead, 10C Shared Space



Most health promotion interventions use a “top-down” approach, where experts create and implement the interventions. This approach can lead to interventions that fail to adequately address the complex factors that impact an individual, their environment, and their resulting health behaviors.

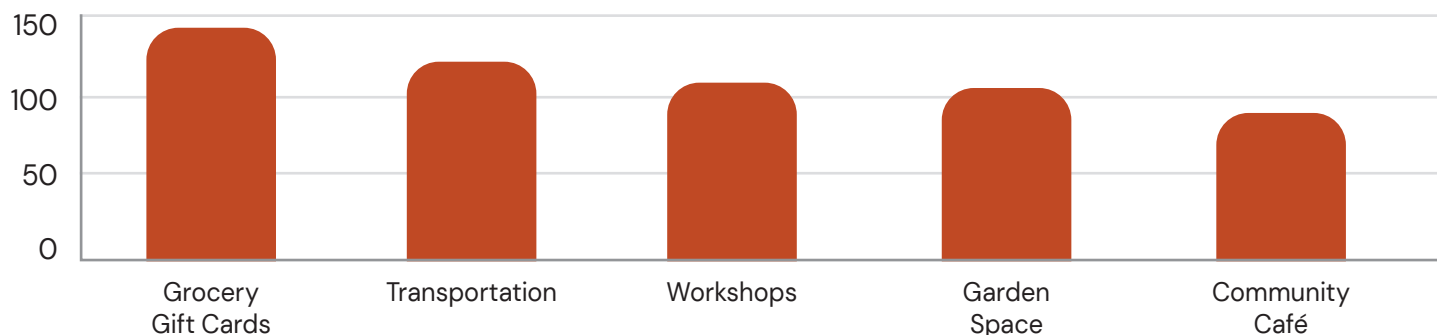
An alternative, collaborative approach is a co-design process, which involves researchers, stakeholders, and end-users working together to produce interventions that address the unique needs of their community.

Food Uniting Neighbours (f.u.n.) is a collaborative project that aims to improve nutritious food access for the Onward Willow community through



the engagement and leadership of community members. This project was leveraged from the work of the Our Food Future Nutritious Foods Workstream. Project partners include University of Guelph, 10C Shared Space, Wellington-Dufferin Public Health, Guelph Community Health Centre, The SEED, and Kindle Communities. This project is funded by the Public Health Agency of Canada’s Healthy Canadians and Communities Fund.

Most popular ideas on how to improve food access in Onward Willow:



Community members were engaged in this project using two methods. The first method involved the creation of a Community Advisory team, and the second method involved engaging a wider population of the Onward Willow community through focus groups.

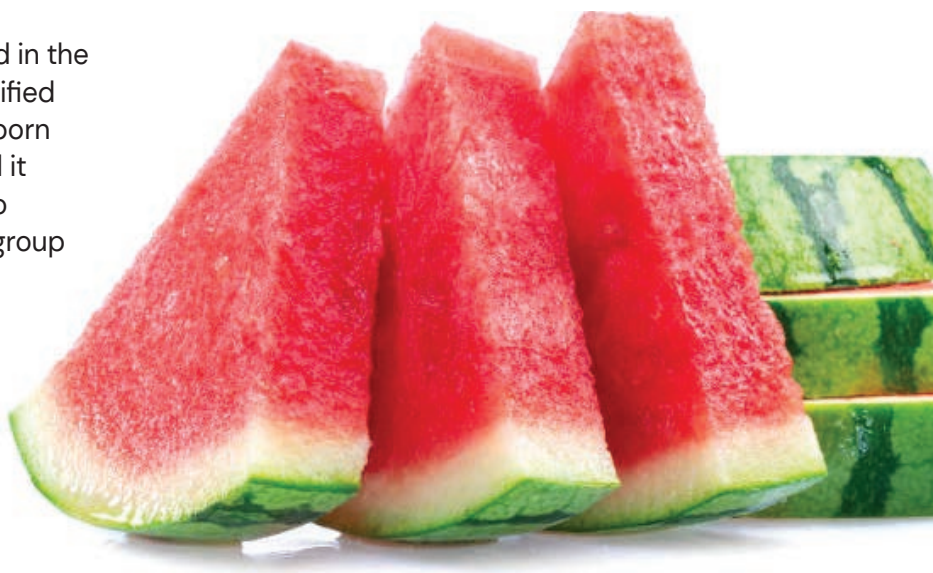
Community Advisors are a group of 13 community members who meet biweekly to lead the project. The group led the project branding and promotion and helped identify and implement actions to improve nutritious food access in Onward Willow. Approximately 30% of the Community Advisors identify as white, nearly 80% are women, and just over half (54%) were not born in Canada. Most find it either "difficult" (46%) or "very difficult" (31%) to cover monthly expenses.

Focus groups, coined Community Idea Discussions, were conducted to understand perceptions of the proposed community actions to improve nutritious food access among the broader community. Eighty-seven community members participated in the focus groups. The majority of participants identified as women (82%) and Black (62%) and were not born in Canada (69%). Most of the participants found it either "very difficult" (44%) or "difficult" (30%) to cover monthly expenses. Analysis of the focus group data revealed that Onward Willow community members prioritized grocery gift cards, transportation, workshops, more garden spaces, and community cafes as action items to improve nutritious food access within their community.

Based on these findings, the Community Advisors have begun to implement these actions in Onward Willow. Actions to date have included:

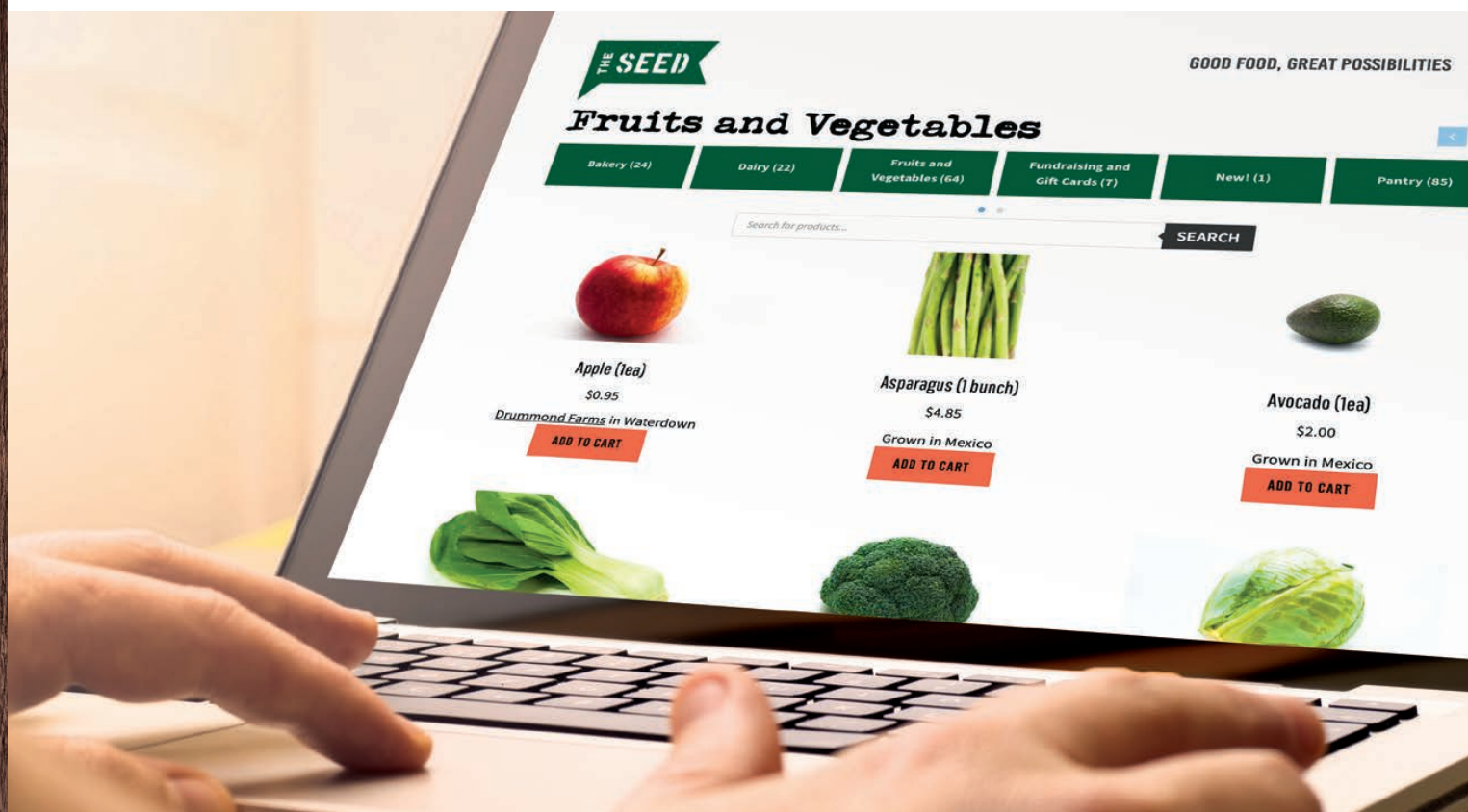
- They have hosted two community cafes where over 200 community members have had the chance to connect over a nourishing meal.
- Community Advisors provided over 25 community members with carts to help transport food from grocery stores or food programs.
- They have also hosted a gardening workshop and provided gardening materials to 10 community members.
- Two workshops focused on improving food skills have been hosted at Shelldale and involved 16 community members.

Future actions include supporting partnering with The SEED to provide a sliding scale market and increased access to Groceries from The SEED.



Food hubs driving community change: The SEED experience

Tom Armitage, Manager, The SEED



Groceries from The SEED is an innovative sliding-scale online grocery store funded by shoppers able to pay full price, and powered by volunteers. The start-up costs were covered in part by Our Food Future. The first-of-its-kind venture in Canada gained popularity and expanded quickly.

We are living in challenging financial times. The cost of keeping a roof over our heads coupled with the rapidly increasing cost of food impacts one and all, yet it disproportionately affects those who were already experiencing food insecurity due to their lower household incomes.

Food insecurity affects thousands of people in our community. Since 2015, The SEED has designed, operationalized, and enhanced programs and social enterprises meant to increase access to nutritious food among people facing food insecurity, while involving the whole community in the solution. The backbone to this effort has been the

Community Food Warehouse, which has allowed us to embed circular economic principles and support the work of aligned community partners.

Embedding circular economic principles into The SEED's programming involved an evaluation of the opportunities and interest in food surplus among program participants. For example, our Groceries from The SEED social enterprise is an online grocery store that allows customers to pay what they can for their groceries on a sliding scale, choosing between paying 33% off the retail price up to the regular retail price. Their orders are packed and made available for pickup at the warehouse.

While customers are able to save substantially on the cost of groceries, there are still many people in our community who cannot afford to buy food at reduced prices. We established a relationship with Second Harvest, Canada's largest food reclamation organization. In our first year of this partnership, we have received, catalogued, and vetted the quality of nearly a million dollars of donated food that has been made available to Groceries from The SEED customers and partner organizations through our Good Food Distribution program.

Community partnerships have been integral to achieving our mission. As The SEED has grown, we have acquired capital assets like the warehouse, walk-in cooler and freezer, refrigerated vehicles, and more we have made these assets available to aligned agencies on an in-kind basis to help them achieve our shared mission of increasing access to nutritious food among people facing food insecurity. Our ability to receive, store, and distribute significant amounts of surplus food has meant that partner agencies have more food available to them to place on shelves, upcycle into ready-to-enjoy meals, and pack and deliver directly to participants' homes.

Adopting these approaches borne of the circular economy movement has been a strong benefit to our community, though we still have a long way to go.

During the peak of COVID-19, hundreds of volunteers helped sort, package and deliver fresh food as well as ready-to-eat meals to community members who were experiencing food insecurity due to lockdown or income loss.



We have over 800 people listed on our Groceries from The SEED waitlist, and we hear from our partner agencies they have more demand than ever. The need to continue to collaborate and innovate is clear.

Please choose one or more ways to be a part of this work! We would love to partner with you.

Donate — Volunteer — Participate

More information: theseedguelph.ca



Food from Home = Food for Home (FFH)²

Karen Houle, co-founder, Food from Home = Food for Home

(FFH)² an urban agriculture project created to support newcomer communities. The garden began in 2020 and sits on lands stewarded by St. Joseph's Health Centre in a lush gulley, bordered by trees, and a high school. The garden shed features hand painted flags representing the home countries of the many community members who tend the soil. While growing vegetable and herb varieties from around the world, we promote ecological-social justice and healing.

(FFH)² is an open collective with newcomers of all ages, and from all corners of the globe, who have expressed interest in learning how to grow food, or, who already know how to grow food but currently lack access to arable land, a supportive community, tools, or resources.

Each year, we collectively train adult farmers and youth who have a passion for growing food. Our project fosters exchange of knowledge and adaptive practices among new and experienced urban farmers in soil preparation, composting methods, nutrient needs, transplanting techniques, direct sowing methods, crop maintenance, and season extension.

Each step of this project generates new opportunities for income generation and meaningful employment.

Our farm community enjoys a range of delicious, culturally significant foods that are often difficult to source at local retail outlets. We save on grocery bills and many have reported improved physical health. Along with gardening skills, we also share language, customs, food-ways, recipes, tasting, and sharing dishes prepared from our harvest. It also just feels good to be part of a large, welcoming, and diverse group.

(FFH)² participants have become skilled and confident urban farmers and gardeners; empowered to propose new community gardens near their schools, neighborhoods, workplaces, and cultural centers; ready to serve as Volunteer Coordinators of community gardens in the future; poised for other leadership roles in Guelph-Wellington; wise advisors to the City on urban agriculture, diversity, environmental concerns, and local-global food-security matters. The garden continues to astound us with its bounty and we look forward to stewarding this land and each other for years to come.

Photo: Chris Tiessen, Toque



Continuing to grow circular business clusters

James Goodram, General Manager of Economic Development and Tourism, City of Guelph



The work of Circular Opportunity Innovation Launchpad (COIL) has elevated Guelph's image as a place where people, ideas, and technology unite to build circular economy business practices. This profile has gained national and international recognition over the last five years and has been leveraged to attract investment interest in the region.

These future focused businesses look to locate in places with like minded values and professional environments that foster vitality and collaboration. This positioning will be integrated into the review of Guelph's business and visitor branding and messaging as we complete our updated economic development and tourism marketing strategy in 2023 and 2024.

The support and encouragement for future focused business model programming will also continue to be a pillar of the work in economic

development through strengthened partnerships and the Grow Guelph network. While connecting businesses with resources, mentorship, and funding sources continue to drive this work, attention will also be made to develop pathways and connections for education and industry to collaborate on training pipelines and talent retention initiatives in the circular economy space.

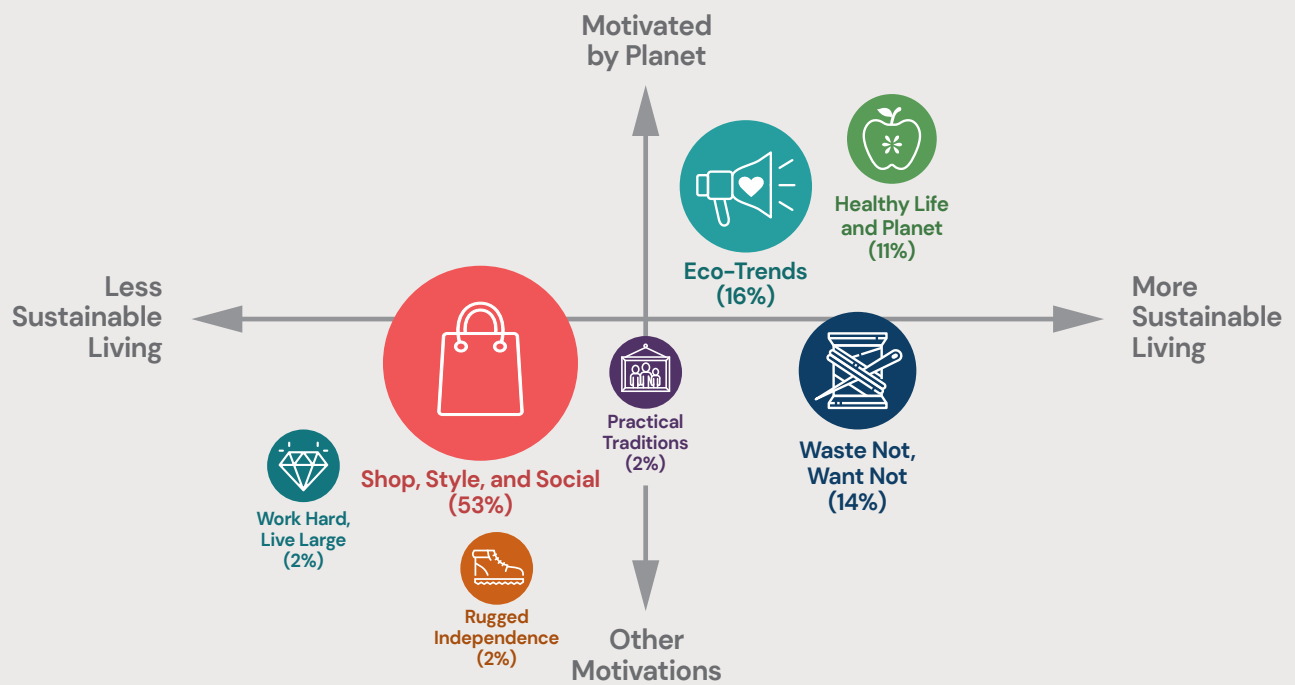
City of Guelph embeds circular practices in economic development strategy.

The results of COIL's new business practices, platforms and technological advancements supported through their funding streams and demonstrations will continue to build a supportive foundation for new circular enterprises to grow and thrive for many years to come — further fueling Guelph as a centre for innovation, creation, and community.

What leads people to take “eco-friendly” actions in Guelph-Wellington?

The reasons might surprise you.

Dagmar Timmer, Managing Director Strategic Initiatives and Co-Founder, OneEarth Living



You might see more people around you engaging in eco-friendly behaviour these days, from eating plant-based diets to reducing their food waste. But they may not be doing it for the reasons you think. What leads one person to “live lightly” on the planet may be very different from what drives another. Understanding these diverse motivations can be key to unlocking the sustainable future we all need.

A [study](#) commissioned by Guelph-Wellington’s Our Food Future project set out to investigate why people adopt planet-friendly practices in their daily lives. Researchers surveyed more than 350 residents to find out what motivates them to take a host of sustainable living actions, from food-related

behaviours to actions like biking or repairing their stuff. The results are both surprising and inspiring.

Respondents cluster into seven main motivation segments, reflecting a range of attitudes and values. Notably, for many residents, saving the planet or being “green” is not their primary motivation for making sustainable choices. Other motivations include waste prevention, thrift, comfort or pleasure, or just “being trendy.” What can we learn from these insights?

In Guelph-Wellington, the majority of respondents (53%) fall into the segment “**Shop, Style, and Social**.” People aligned with this motivation have

the desire to explore new, trendy experiences and products, often influenced by popular culture. The next-biggest segment is “**Eco-Trends**” (16%), reflecting alignment with positive environmental trends and making conscious purchasing decisions. For both segments, people driven by these motivations follow trends and influence each other as peers and in groups, making them a potentially strong force for change.

Less-dominant segments are “**Waste Not, Want Not,**” reflecting a desire to minimize what you own, use only what you need, and reduce waste; and “**Healthy Life and Planet,**” driven by the urge to do what’s best for both personal and planetary health.

Insights into what motivates people to act can support efforts to mainstream sustainable living actions, making these accessible and appealing to a diverse set of residents. Businesses, municipalities, and other changemakers can tailor their goods and services, strategies and communications, campaigns, and infrastructure to these different segments to enable wider adoption of lighter living practices.

In Guelph–Wellington, the power lies in harnessing the connections between the dominant “**Shop, Style, and Social**” and “**Eco-Trends**” motivations to foster sustainable change. Both segments are found mainly among a younger, tech-savvy demographic, and are linked by a common preference for social sharing, peer influence, and the allure of popular culture. Residents driven by **Eco-Trends** can inspire the socially-motivated **Shop, Style, and Social** to adopt more sustainable actions, by making eco-friendly choices seem like “the thing to do.”

We do a better job connecting with people when we take these diverse motivations into account. Businesses and others in Guelph–Wellington are already using these insights to spur “eco-friendly” action:

Food box creates buzz for upcycled ingredients

A collaboration with Guelph Box harnessed pro-social motivations by offering an innovative “Upcycled Holiday Food Box” which featured local products made from upcycled ingredients. A shareable social media campaign resonated with consumers and led to nearly 100 boxes sold, prompting an additional run in March.

Businesses use the motivations to expand their market

After 160 area businesses were introduced to this research, they explored how to weave these insights into their marketing, accelerating growth and enhanced outreach for both businesses.

Social-friendly messaging supports waste diversion

Guelph–Wellington integrated these insights in its decision to place gold stars on the waste carts of residents with exemplary sorting practices to signal to neighbours who is “a good sort” and supporting improved sorting and waste diversion.

Right: The Guelph Box 2022 upcycled food holiday box exceeded sales projections, resulting in a second edition in May 2023. Below: A community social marketing ‘gold star’ campaign celebrated good sorts with stickers on waste bins to encourage similar behaviour from others.



Leading economic development, resiliency, and innovation by supporting business collaboration

Alison Crumblehulme, Chief Executive Officer, Boundless Accelerator (previously Innovation Guelph) and Christopher Coghlan, Director of Curriculum & Strategy



It has been almost four years since Guelph-Wellington began its most recent circular economy journey. The roots of sustainability and environmental leadership run deep in the area, from long-established farms practicing regenerative agriculture, to dynamic new product and service innovations. The Smart Cities Office has done an exemplary job organizing the considerable resources and desire for collaboration in the region, and across southern Ontario. Boundless Accelerator is proud to have been a delivery partner for Our Food Future and Circular Opportunity Innovation Launchpad (COIL).

Our Food Future was the first effort to harness Guelph-Wellington's considerable strengths in the circular economy. With a focus on agrifood, businesses took a keen interest in this work, creating new circular products or services, integrating more circular practices into their business, or engaging in a circular collaboration. Boundless Accelerator delivered Seeding Our Food Future, which supported Small and Medium Enterprises (SMEs) with seed funding, mentorship, and networking opportunities, along with an optional loan from Harvest Impact at IOC. SMEs in this program were involved in regenerative agriculture, vertical farming, hospitality, and food recovery and delivery.

Business collaboration was a key success

While the majority of mentorship was delivered by Boundless Accelerator, contributions from IOC, Business Centre Guelph–Wellington, and Provision Coalition provided complimentary support for select businesses in the social enterprise, startup, and food processing areas. A key lesson learned was that supporting a diverse group of SMEs in a local agrifood system encourages collaboration amongst them. Farms practicing regenerative agriculture found keen partners in the retail and hospitality fields. Retail and hospitality firms developed strong partnerships with those involved in food recovery and delivery.

The impact of COVID-19 on Seeding Our Food Future was significant. We discovered that a resilient agri-food community was present in Guelph–Wellington, working together online, making networking and education on digital platforms effective. Projects also tended to have a focus on COVID-19 recovery, and frequently addressed the struggles of the region's most vulnerable citizens, such as women, elderly, and recent arrivals to Canada.

Business successes allow us to broaden our reach

COIL expanded the work of Our Food Future across southern Ontario and broadened programming to businesses in the construction, textiles, and waste management sectors. Boundless Accelerator delivered most of the mentorship for COIL's Evolve, Activate, and Circulate CoLab programs and demonstration projects, while IOC and the Business Centre Guelph–Wellington (with LaunchIt Minto) continued their roles.

COIL drew on the unique position of agrifood to influence the circular transition. The results at the community and provincial levels have been phenomenal, and there is promise for national impact.

SMEs that function as regional food hubs strengthened their offerings in Guelph–Wellington, Haliburton, Huron, and Orangeville. The upcycled food revolution came

to the forefront, with hubs in Guelph–Wellington and Toronto standing out, producing multiple businesses making use of by-products and co-products. Container reuse and recycling is an additional area that sparked significant growth. COIL supported SMEs that developed in Guelph–Wellington, Kitchener–Waterloo, and Toronto. Retailers, wholesalers, restaurants, and consumers enthusiastically took part. A lesson learned was that SMEs were keen to initially pilot their initiatives in selected communities before expanding programs to include large, province-wide partners. This reinforces the importance of community infrastructure, expertise, and support for agri-food innovations to scale.

COIL's expansion into construction, textiles, and waste management was noteworthy. As with agrifood, the latter two groups of businesses developed community hubs for waste-to-value solutions. The construction sector work took on a greater focus with the support of the Co-operators and the Zero Waste Economic Transformation Lab, culminating with a national Circulate CoLab cohort. Supported by Vancouver Economic Commission and Halifax Partnership, the central lesson learned was that there is great potential for a national network of COIL partners, as the recent project reinforced local strengths and developed collaborations between SMEs across provincial boundaries.

The future for business is circular

Our Food Future and COIL provided foundational leadership for southern Ontario at the beginning of a major societal transition away from a linear economic system. The circular economy has evolved from a buzzword and industry trend to a societal movement that has attracted policymakers, large multinationals, not-for-profits, and entrepreneurs across sectors. Alignment with emerging technologies such as Artificial Intelligence and renewable energy will require multi-actor collaboration at community and regional levels. The circular economy has proven to be a point of convergence for addressing economic transition at the nexus of socio-economic challenges. Experience has shown communities are essential for meaningful change. Let's do this together!

Working together for climate-friendly farming

Justine Dainard, Smart Cities Project Manager, County of Wellington and Jordan Grigg, Sustainability Programme Coordinator, County of Wellington



In October 2023, Wellington County released the Experimental Acres Handbook, a comprehensive, free guidebook to help other communities introduce regenerative agriculture techniques to local growers.

Farming isn't for the faint of heart.

Imagine being in a business where your success comes down to decisions you only get to make once a year — but a weather-based curve ball could change the game overnight. Oh, and did we mention that folks will go hungry if you fail?

Producing food is hard, and producing enough to meet demand has required farming to scale up like all other global industries. Now, as in other industries, there is a need to rethink our approach. Our planet is experiencing the triple crises of pollution, biodiversity loss, and climate change, all linked to land-use sprawl and reliance on fossil fuel. Large-scale food production contributes to these issues, but unlike other industrial sectors, agriculture has the potential to be a strong climate solution while safeguarding its own future.

Climate-focused farming, often called regenerative agriculture, is an approach which requires a shift in practices. Regenerative agriculture combats the triple-crises by minimizing dependence on petrochemicals, encouraging a balance of multiple species, and restoring the carbon-sequestering properties of the soil. It treats farming as a part of the ecosystem, and the co-benefits of that relationship improve the conditions to thrive — the perfect expression of a circular economy.

Regenerative practices

Cover cropping is a common regenerative practice; after the main crop is harvested, new seed is left to grow until the following spring. This mimics the perpetual cover of a grassland. The year-round roots allow water to make it deeper underground and the sugar-delivering root system feeds the underground life which stores carbon.

Another approach is to rotationally graze animals, letting them eat, poop, and trample as they are systematically given access to small sections of a field. Manure returns nutrients to the soil, helping the plants recover. Grazed plants put more resources into the root system, gathering the strength needed to regrow and further amplifying carbon storage.

It is important to note, however, that there is no one-size-fits-all solution for these approaches. Differences in landscape, soil type, rainfall, crop history, and equipment all impact how farming can be done — even from one field to the next. There are as many ways to practice agriculture as there are farms. Farmers are the experts on their land, and their knowledge needs to be centered in any discussion about how to do climate-focused farming.

What can municipalities do?

While the farmers are at the forefront of this industry-shift, they can't do it alone, and municipalities are uniquely positioned to help. Greenhouse gas targets are set at the federal level and the province offers some best practice guidelines, but it is at the local level where we can take meaningful action. The most complex challenges — such as climate change — express themselves differently in different places, so a place-based response involving local knowledge and partnerships is essential.

Traditionally, municipalities have seen agriculture as a fairly independent sector, but as we begin to engage in climate work it is becoming critical to align our support with on-farm action. The municipal tools of land use planning and economic development play a part, but we can't stop there. If we expect farming to create additional 'ecosystem services' such as increased biodiversity and carbon-sequestering soils, we need systems which specifically support and value those services — which is why we created the Experimental Acres program and the Climate-Smart Agriculture Platform.

Experimental Acres

The Experimental Acres is a municipal program designed to support farmers who are confirming what practice shifts will work on their land. It encourages a test of new practices, providing some research support and compensation. It also brings the municipality into

conversation with farmers so together they understand what opportunities and barriers exist locally on the path to our collective climate goals.

Climate-Smart Agriculture Platform

The Climate-Smart Agriculture Platform (CSAP) is intended to recognize climate-friendly practices and match them to funding support. Its design connects agricultural practice shifts, outcome metrics, and climate finance with the goal of harmonizing and accelerating the good work of farmers. The CSAP tool will align with the Global Farm Metric and be shared broadly.

Together, the two programs layer onto one another to provide farmers with a place to start and a way to continue, while offering municipalities a pathway for providing support. A sustainable food system starts with the farmers but doesn't end there; municipalities, researchers, funders, and consumers can all contribute.

Honouring its commitment to sustainable agriculture and food security, Am Braigh organic vegetable farm in Mono, ON was one of the first participants in the Experimental Acres pilot project.



Now imagine being in a business where your success comes down to decisions you only get to make once a year — and after an adverse event your healthy soil, diverse species and multilayered support system all help you bounce back.

Kind of warms your heart.

Introducing organics diversion in the County

Das Soligo, Manager of Solid Waste Services, County of Wellington



As a rural community, historically the County of Wellington promoted and supported backyard composting as the main method of diverting organics from landfill. Composting is a true circular economy, as the scraps created in preparing foods harvested from gardens are returned to soils as nutrient-rich compost which will then nourish new plants.

To capture and divert even more wasted food, curbside collection of organics began in July 2020, a service provided to all single-family households across Wellington County every week. This program has been successful in collecting nearly 6,800 tonnes of organics in the first 2.5 years of the program.

In order to improve results and better understand residents' habits related to wasted food, the County of Wellington undertook extensive wasted food audits with a select and diverse group of households. In partnership with the University of Guelph, the County developed and delivered an intervention kit to each of the sample households then reassessed their wasted food routines through more auditing. The households were then invited to participate in a survey to gauge the effectiveness of the intervention. The results of these efforts will continue to be utilized to shape future programs, services, and communication efforts.

Large generators of organic waste from the industrial, commercial, and institutional (ICI) sectors were not eligible for curbside collection, however many expressed an interest in diverting organics. Necessity led to innovation and a new partnership with the Circular Innovation Council (CIC) to develop a unique pilot project to not only develop strategies to overcome some of the common challenges with collecting and diverting these materials from the ICI sector (particularly cost), but to also identify opportunities to rescue food, improve access to healthy foods, reduce the amount of wasted food to begin with, and develop financially viable, efficient, and sustainable collection systems for organic waste. In the first 18 months, more than 22 tonnes of edible food was rescued, 303 tonnes of organic waste was collected and turned into 94 cubic yards of compost — a great success by any measure.

This is exciting work with many challenges met, more lessons to be learned and shared with other municipalities, with the goal that other communities will see similar successes in diverting and managing wasted food.

Municipal solid waste innovations help drive the circular economy

Cameron Walsh, Division Manager, Solid Waste, City of Guelph



The Waste as a Resource Workstream, one of the pillars of the comprehensive Smart Cities approach, is a collaboration of County of Wellington, University of Guelph, Provision Coalition, and the City of Guelph, who together brought depth, breadth, tools, and community reach to lead critical initiatives designed to leverage municipal waste systems to drive circularly and results.

Successful efforts include:

Integrated solid waste management master planning and value stream mapping

As envisioned in 2019, the novel approach taken was to conduct organics value stream mapping from farm to handling and processing as part of the City's [Solid Waste Master Plan](#) update process.

The goal was to identify opportunities to maximize diversion of food waste and organics from landfill and create opportunities for innovation and economic development. The output of this work was a Food Waste Flow Analysis, summarized as a Sankey diagram, and helped focus efforts whereby triple bottom line results can be maximized, allowing municipal leaders to embed this learning into the City of Guelph's Solid Waste Master Plan.

This work received a sustainability award from the Federation of Canadian Municipalities in 2023 and the research model successfully applied to construction renovation and demolition material streams through the Circular Opportunity Innovation Launchpad's Zero Waste Economic Transformation Lab (ZWETL) accelerator processes with private sector partners, The Co-operators, as an example of utility and scalability.

Measurement and sensor technology

The City of Guelph currently provides state of the art automated three stream waste collection to the community, including multi residential properties. Guelph's investment in technology and public in-house operation creates unprecedented access to waste data, advanced technology and infrastructure that can be leveraged and extrapolated.

A key workstream objective was to address the challenge of collecting data related to system performance and consumer organic waste sorting behaviours. Improved understanding of these behaviours would support intervention and public communications. Innovative research efforts included RFID and GPS technology to generate targeted geospatial data and utilize the municipal waste system to test and support the development of AI and sensor technology. Through the COIL accelerator, entrepreneurs developed optical technology that, through machine learning, could identify contamination in the organics stream to a 90% accuracy level, exponentially reducing time to audit while providing real time data.

Based on the success of the pilot, the City is using real time communication with respect to sorting tips and compliance concerns to residents, greatly enhancing both education and enforcement capabilities and leveraging the existing resources of the City.

Developing a carbon-backed social currency

The City of Guelph has a longstanding track record of environmental stewardship and innovation including management of landfill emissions and source separated organics composting. The City has partnered with the Federal Government as part of Environment Canada's Pilot Emission Removals, Reductions and Learnings (PERRL) program and later the Greening Canada Fund L.P. and has sold carbon credits independently on the voluntary market. Guelph currently quantifies and verifies its credits using the most stringent protocols and revenue generated through the sale of carbon credits flows to the City's environmental reserve fund to support continued investment in sustainable practices to meet the City's carbon reduction targets.

The novel approach was to explore the opportunity to leverage Guelph's experience and the voluntary carbon market to develop a carbon backed social currency through which carbon credits could be generated and traded at the community level to promote sustainable behaviours and choices.

Through the COIL accelerator, entrepreneurs developed a working prototype smartphone application. The City is currently working with the proprietor to develop the next phase, a community pilot, expected to launch in the fall of 2023.



Corporate responsibility and leadership in supporting circular innovation and communities

Karen Flamand, Associate Vice President,
Claims Shared Services, The Co-operators



There is no doubt that climate change is impacting humanity and our world. Through the world's linear economy, billions of tonnes of carbon emissions are released every single year causing climate change. The insurance industry is extremely concerned about climate change because it is causing increased severity and frequency of weather events resulting in serious problems with affordability and availability of insurance coverage. The Chief Risk Officers (CRO) Forum in their position paper on Insurability and Resilience in a Changing Climate states: *"For insurers to exist there must be an insurance need at an affordable price. Seeking to maintain insurability, where possible, to support adaptation and to build increased resilience will not only be vital for society but also to the long-term role for insurance within society."* (CRO Forum, 2019). The insurance gap is growing.

Co-operators Group Limited, with its head office in Guelph, set out to understand its role in climate change, beyond corporate responsibility. With its company vision, Co-operators means to act as a catalyst for sustainable and resilient society. However, through research, Co-operators found that it disposes of 116,000 tonnes of waste annually into landfill from the way it which it handles property insurance claims. Then Co-operators repairs or replaces with the same materials or products that were thrown into the landfill, doing nothing to help customers build back better. The majority of insurance policies in Canada do not pay for repairs and replacements with sustainable or resilient materials in the event of a loss because it costs 15 to 25 per cent more for these upgrades. Unintentionally, Co-operators is contributing to a linear economy through its products and claims

services, increasing carbon emissions leading to the increased climate risk.

Understanding this impact, Co-operators set out to connect with insurers in Europe and South America to find different insurance products and services that align with a sustainable and resilient future. With this knowledge, Co-operators implemented two sustainable claims methods on property claims — drying in place and cleaning of soft contents — that reduce loss costs, waste to landfill, and carbon emissions. In fact, with these sustainable methods, it is anticipated to save \$12 to \$16 million annually, with a reduction of approximately 1200 MTCO₂e in carbon emissions. The positive climate impact is equivalent to reducing the carbon emissions from charging 155 million cell phones for one year.

The research showed that customers are interested in building back better, but the financial cost is the biggest barrier for them. Therefore, the loss cost savings are being used to fund increased insurance coverage for customers to build back better, rather than return these savings to the profit line.

This circular insurance is a natural alignment with the co-operative identity and values of Co-operators. In fact, an enterprise Resiliency and Sustainability Program is now dedicated to imagining a future that is different, where Co-operators embeds sustainability and resiliency into its core business strategy.

To address waste diversion further, Co-operators partnered with COIL and the City of Guelph to form the Zero Waste Economic Transformation Lab (ZWETL). The circular economy is a large ecosystem, and ZWETL is focused on how to grow the ecosystem for diversion of construction debris and waste. Through this partnership, Co-operators is gaining an understanding of how businesses, organizations, and governments can work together to create circular economies in a place-based setting. This will certainly help in dealing with the climate risk faced by people and communities.

The world needs to change. We can make a difference with our thoughtful actions and compelling stories. We encourage all stakeholders to research, seek innovation, seek partnerships, and put skin in the game.

Taking our circular reach beyond food

Madeline Carter, Program Advisor Lead, Smart Cities Office, City of Guelph

The Zero Waste Economic Transformation Lab, thanks to founding corporate supporter Co-operators, expanded COIL's work beyond food related initiatives. It focuses on implementing place-based circular economy strategies that develop and experiment with reducing or redirecting waste materials in the construction, renovation and demolition (CRD) sector.

The Lab started with research, engaging stakeholders, and examining CRD materials within Guelph-Wellington. Additionally, they analyzed the social, political, economic, and policy factors contributing to waste generation and disposal in this sector.

An immediate challenge identified was the current practice of disposing construction materials into a

landfill bound dumpster instead of using Guelph's existing recycling programs for asphalt roof shingles, concrete/rubble, drywall, clean wood, metal, and more. This system gap can be attributed to many factors: inexpensive landfill tipping fees, labour shortages, cost of labour, and total project costs.

The Lab called for innovators to provide a solution. Pilot projects were conducted on new home construction sites and a commercial property where multiple bins were provided so that workers could separate materials and utilize the City's recycling programs. The success of these pilots led to the expansion of the project's reach in Guelph, aimed at gaining broader adoption while also developing a robust business case for the proposed solution.

When the Guelph Farmers' Market needed a major building renovation in 2023, the property's manager, 10C, saw a perfect opportunity to partner with COIL to pilot new construction waste sorting processes that would keep hundreds of tonnes of material out of the waste stream.

We're Renovating and this Construction Waste will be Recycled as much as possible!

We're separating the wood, drywall, cardboard, and other construction waste from this renovation so they can be repurposed to the fullest extent possible.

It's a pilot project to learn the best methods to separate onsite construction debris. We'll share what we learn with the industry to encourage more separation and recycling.



COIL.eco

Did you know?

Currently in Ontario, most construction debris ends up in landfill, responsible for 40% of our solid waste. We're changing that!



Zero Waste
Economic Transformation Lab



The Lab's primary focus has been on developing circularity in the downstream segments of the built environment. This involves exploring secondary markets for materials and addressing reverse logistics and systems gaps that exist to divert materials out of landfill.

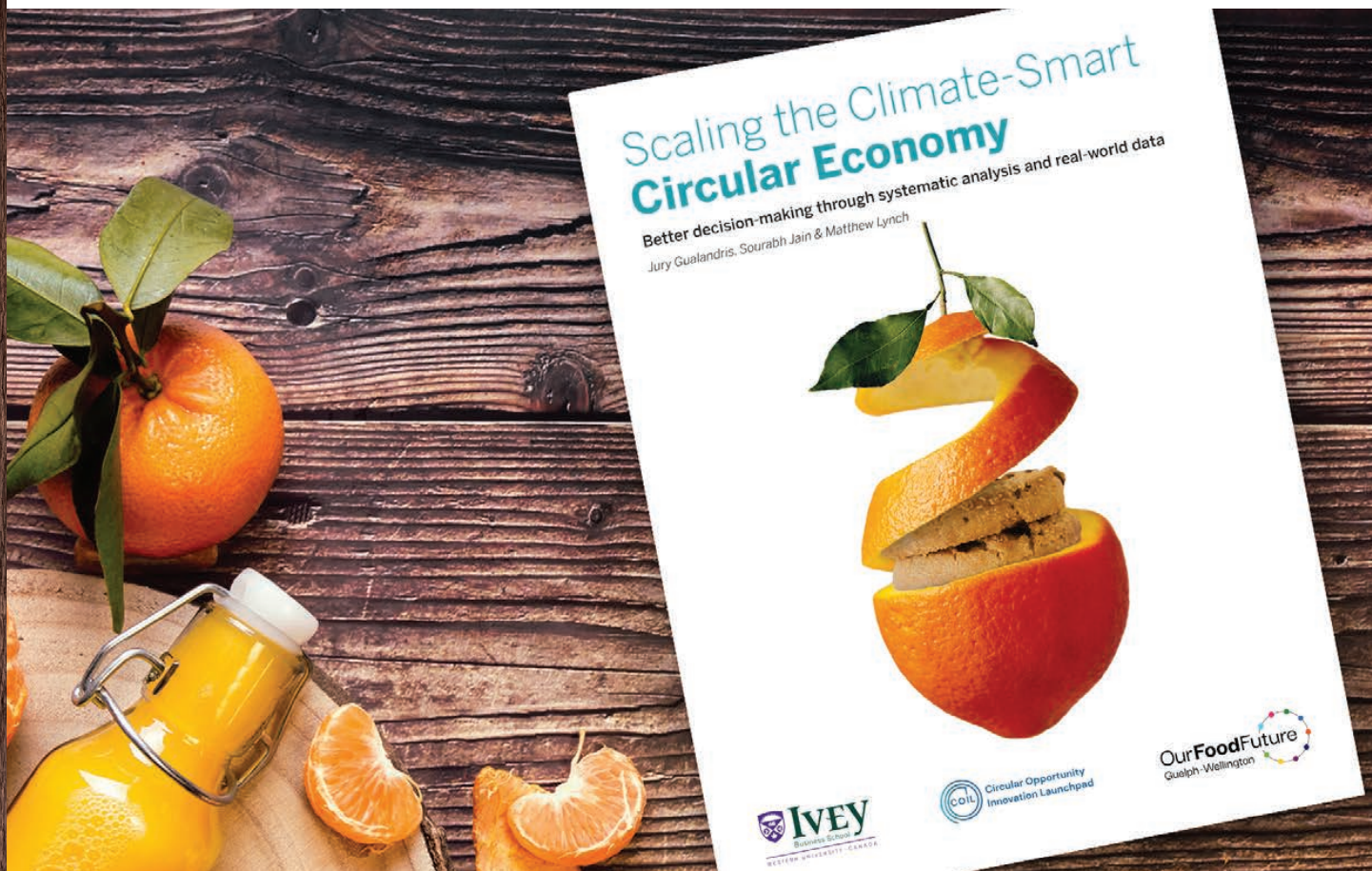
To address these issues, the Lab initiated a Canada-wide call for new ideas through the National Construction and Demolition Circular Innovation Challenge. Funding was granted to four projects to develop prototypes for their initiatives, with the chance to further expand their projects to a full-scale pilot through a pitch competition. The top innovative ideas included source separation education campaigns, increased reuse of recycled asphalt

pavement, specialized machinery to sort materials found in mixed demolition debris, and a technological solution to salvage materials from buildings at end of life.

The aim of these projects is to find solutions that address systems gaps, with the hope of sharing these successful strategies with other cities and regions across the country. These successes accelerate the transition to a climate-smart circular economy that benefits the environment and promotes sustainable practices nation-wide.

Climate-smart circularity and building circular clusters

Jury Gualandris, Associate Professor, Operations Management & Sustainability,
Ivey Business School



The [Circular Economy Lab](#) at the Ivey Business School [Centre for Building Sustainable Value](#) has been on a mission to study, analyze, and promote circularity since 2018.

Our partnership with Our Food Future and COIL and has been a critical driver of the key knowledge and insights the Lab has produced. This collaboration has produced a number of impactful outcomes: a landmark study of climate-smart circularity and accompanying [report](#), an in-progress research project on 'circular clusters', events (such as this [webinar](#) hosted with the Network for Business Sustainability), and the highly-innovative Circular Leadership Program (CLP). The [first cohort of CLP](#)

[worked with 19 entrepreneurs and business leaders](#) to build their systems thinking capabilities and to deploy these to shape innovative new circular business ideas. This first cohort produced some very exciting new solutions, and the support from COIL enabled five standout companies to secure up to \$20,000 to fund their circular ideas.

Increasingly, policymakers are promoting the transition to a circular economy to not only reduce waste and save natural resources but also to mitigate climate change. However, ecological gains of the circular economy may actually be highly contextual and require holistic analysis tools such as Life Cycle Assessment (LCA) to guide decisions.

This motivated us to apply LCA to circular food economy projects supported by the Our Food Future initiative in Guelph-Wellington (as well as a similar project in the Montreal region). The multi-year study analyzed over 110 “discard exchanges,” in which one firm took the potential wasted food from another for an intended beneficial use, with a focus on wasted food upcycling.

Our joint report with Our Food Future and COIL — [Scaling the Climate-Smart Circular Economy](#) — was the outcome of this work. The research produced some eye-opening findings, especially that the well-established wasted food hierarchy doesn’t necessarily guide correct decision-making in terms of climate outcomes. Our work clarified the key enablers of how circular upcycling solutions can also be climate-smart — factors like efficient processing and minimizing the distances materials are transported. Importantly, many of the circular food entrepreneurs we studied were already operating in this climate smart fashion. This

report has generated significant interest and attention and is informing the policy dialogue in Canada, such as [this recent report](#) from the Canadian Climate Institute.

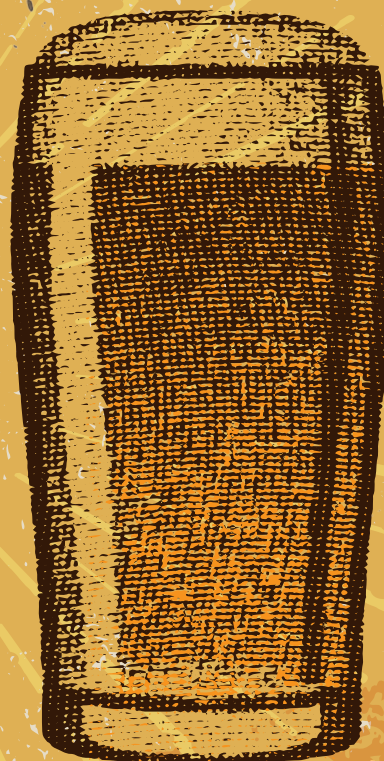
We are now applying the same approach to look at the climate benefits of circular clusters — whole networks of circular businesses connecting with others, like we are seeing emerge in Guelph-Wellington. This research will be published shortly, and the work has led to a collaboration with Canadian Standard Association (CSA) on a new project. This project will extend our work with Our Food Future to construction and textile sectors to build quality standards for circular decision-making in food, construction, and textile sectors.

This collaboration demonstrates the exciting possibilities when changemaking initiatives like Our Food Future and COIL partner with leading research partners like Ivey — we can really help shape pathways of systems change: in this case the transition to the circular economy.

BOTTOMS UP HELPS THE BOTTOM LINE!

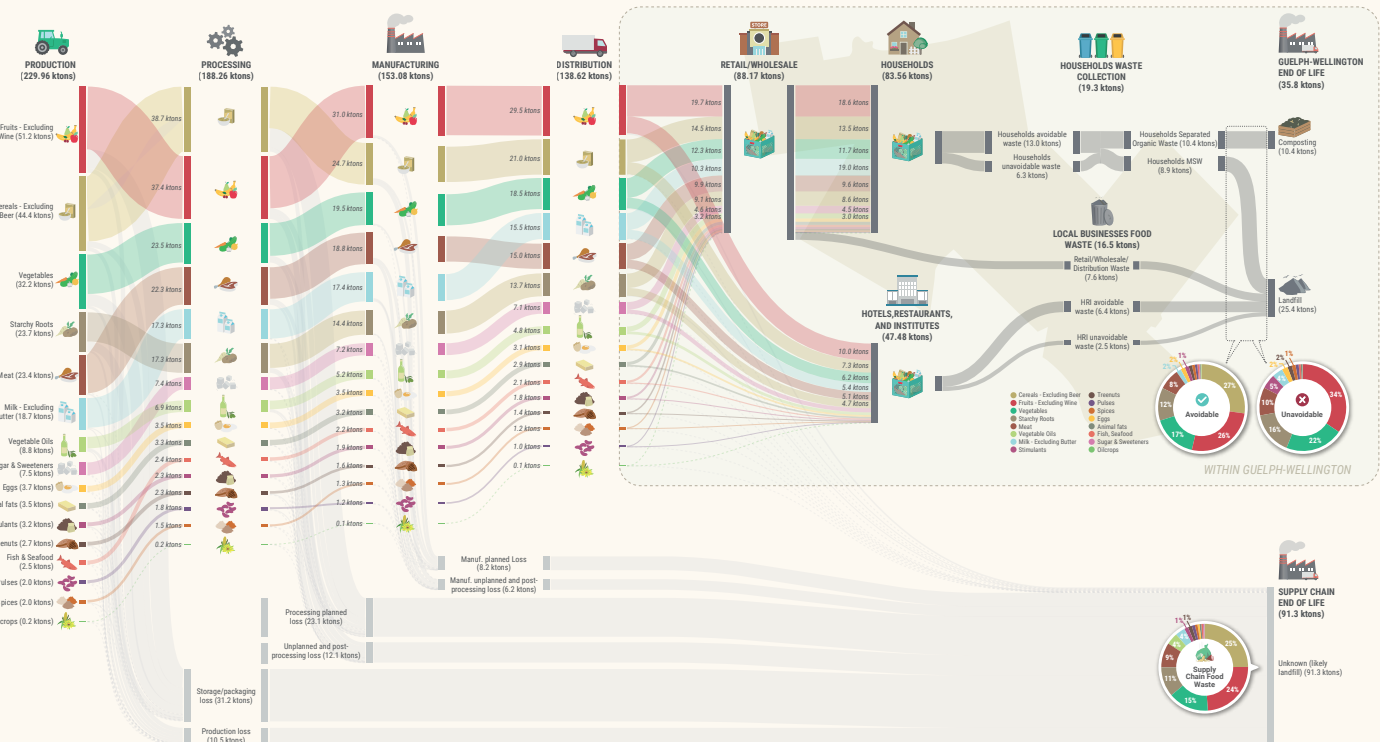
A circular brewery's spent grains aren't waste... see how far a pint goes!

Spent Grains.....	16 oz
Black Solider Fly Feed.....	8 oz
Rainbow Trout Batter.....	2 oz
Artisanal Bread Loaf.....	2 oz



System level analysis and how it can lead to change

Mike Von Massow, Ontario Agriculture Collect Chair in Food System Leadership, University of Guelph



In 2021, Our Food Future mobilized the region's widest reaching research to identify waste hotspots across the food chain. More than 70 data sets were analyzed, resulting in a comprehensive picture of the areas where interventions can lead to the greatest impact. Learn more about the [Food Material Flow Study](#).

Food waste and food insecurity are difficult problems that are crucial to address. The Our Food Future sponsored Food Material Flow Study helped set a critical foundation of data from which action on the circular economy could be launched in the Guelph-Wellington food system. This helped catalyze actions promoted by Our Food Future and COIL.

This project has onboarded and motivated new people and organizations to try new things and take chances that can move wasted food products to points of use.

From this process, we've learned that although many individuals and organizations are still uncomfortable talking about how much food they see lost in their part of the supply chain, interest, and willingness to discuss this sensitive information is growing.

This effort should serve as a call to action for governments to help incentivize lost food product data sharing from supply chain participants. Quality data is so important for these efforts, and it is limited in Canada. Further, we should reframe our discussion of lost and wasted food from one that

negatively values the producer of the lost product to one that celebrates each business or individual that is able to redirect formally lost products back into supply chains for use.

The Food Material Flow Study also demonstrated that immediate perfection is not required to effect change. Starting the conversation with the data we currently

have available to help spur more discussions and new ideas is what is needed to motivate the change we need to see. This will help motivate changes to policies and perceptions, which will provide more data to improve our understanding of the circularity of the food supply chains and allow us to develop increasingly nuanced and targeted solutions.



Growing circularity from the ground up through the Circular Cities and Regions Initiative

Joanne Gauci, Senior Advisor, Metro Vancouver & the National Zero Waste Council



CCRI's webinar series features leading Canadian and international practitioners, and explores a variety of themes like getting started on circularity, embracing Doughnut Economics, and circularity as a means to addressing climate change. Learn more about the CCRI at www.canadiancircularcities.ca.

Communities across the country are taking the next steps on the circular economy through the Circular Cities and Regions Initiative (CCRI). The CCRI, which was launched by the National Zero Waste Council, the Federation of Canadian Municipalities' (FCM) Green Municipal Fund, the Recycling Council of Alberta, and RECYC-QUÉBEC in 2021, provides local governments with knowledge, tools, and peer-to-peer learning opportunities to put circularity into action. In the CCRI's first year, 15 cities and regions participated in an immersive

year of circular economy knowledge sharing and capacity building, while 10 more communities completed a similar year of activities the following year. Participants spanned the country from Vancouver to St. John's.

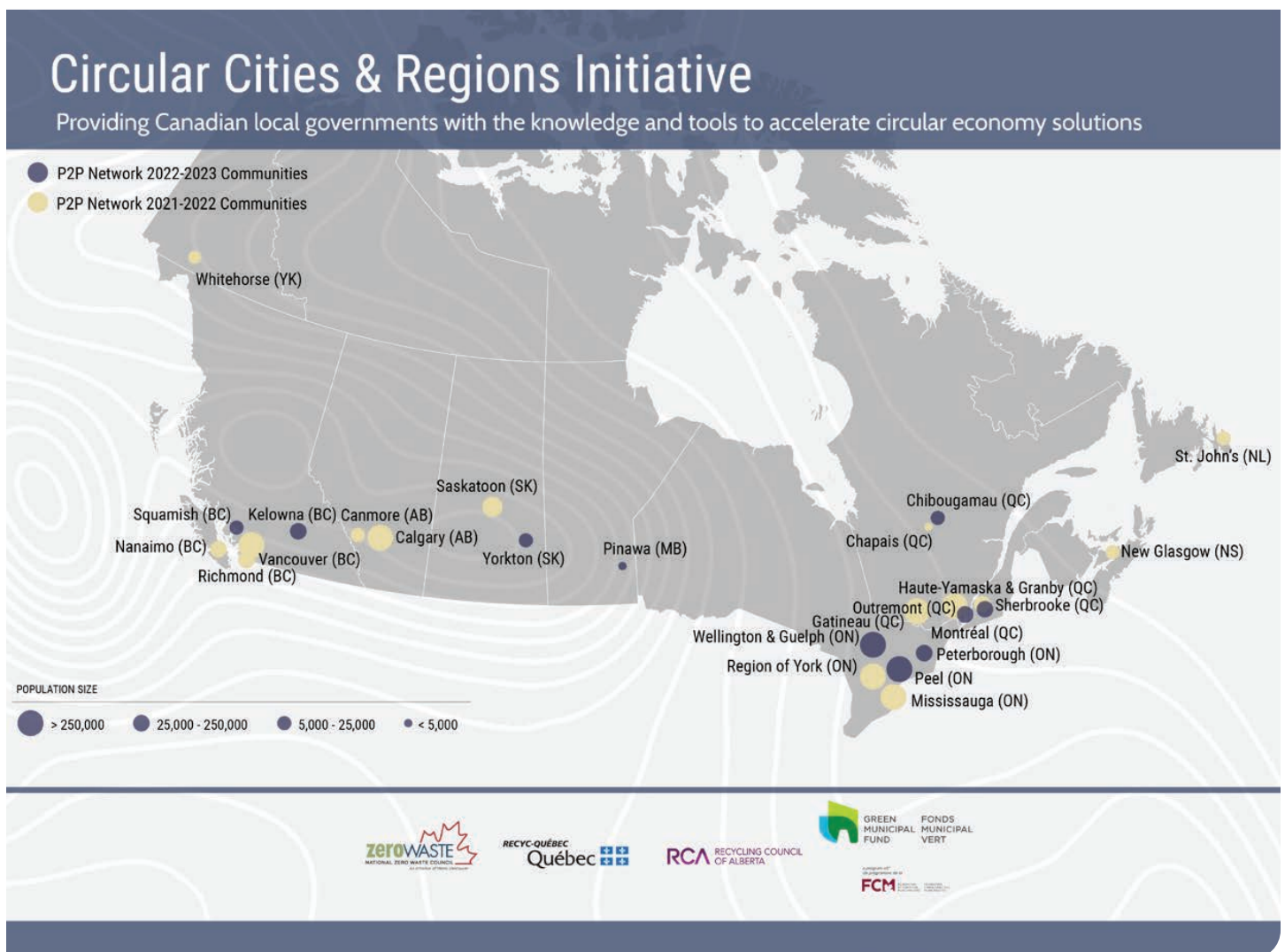
Through the program, community leaders learn and share best practices for implementing circular economy strategies and policies, consider their own circular economy opportunities through an action planning process, and gain access to

mentorship and support from advisors representing leading Canadian and international circular economy educators and practitioners. Given that circular economy is still so emergent, creating a community of practice that nurtures connections between peers and leading practitioners has been one of the key successes of the program — helping to spark new ideas for local innovation and replicating and scaling success stories.

For the CCRI communities, participation in the program helped them think about the many different and varied ways they can enable circularity — from supporting the emergence of a circular built environment and circular food systems locally, enabling a culture of repair and reuse, to looking

inward to their own operations and procurement practices and supporting new solutions through innovative pilots. The communities discussed common challenges and opportunities, problem-solved together, and deepened their understanding of the benefits to be realized.

Accelerating the transition to a circular economy is recognized as an opportunity for new jobs and environmental sustainability — and, perhaps most critically, a pathway to deepen and accelerate progress on climate change. The CCRI member cities and regions, alongside others across the country, are demonstrating how local governments can lead the way in Canada's circular economy transition.



Lessons for a circular economy

This experience brought with it an abundance of joys and awakenings, validations and surprises, reinforcements, and reminders. Below are key lessons we learned from designing and implementing our two circular-economy initiatives: Our Food Future and Circular Opportunity Innovation Launchpad (COIL).

Our intention is that by sharing them, we can help other municipalities, and our country, move more quickly when developing a climate-smart circular economy.

Lesson 1

Successful projects move at the speed of trust. Invest in building this first.

Lesson 2

Food security needs everyone at the table. The public sector should be supporting local solutions.

Lesson 3

Effective food waste solutions require system-scale organization.

Lesson 4

New infrastructure is needed to specifically support a circular economy; governments must play a role in this.

Lesson 5

Farmers need more support for climate-focused food production.

Lesson 6

Data only becomes information when creative minds are telling the story.

Lesson 7

Collaboration = amplification. Harness networks and move out of silos.

Lesson 8

Businesses need matchmakers. Active facilitation is essential.

Lesson 9

Circular economy is climate action.

Lesson 10

There is no such thing as waste.

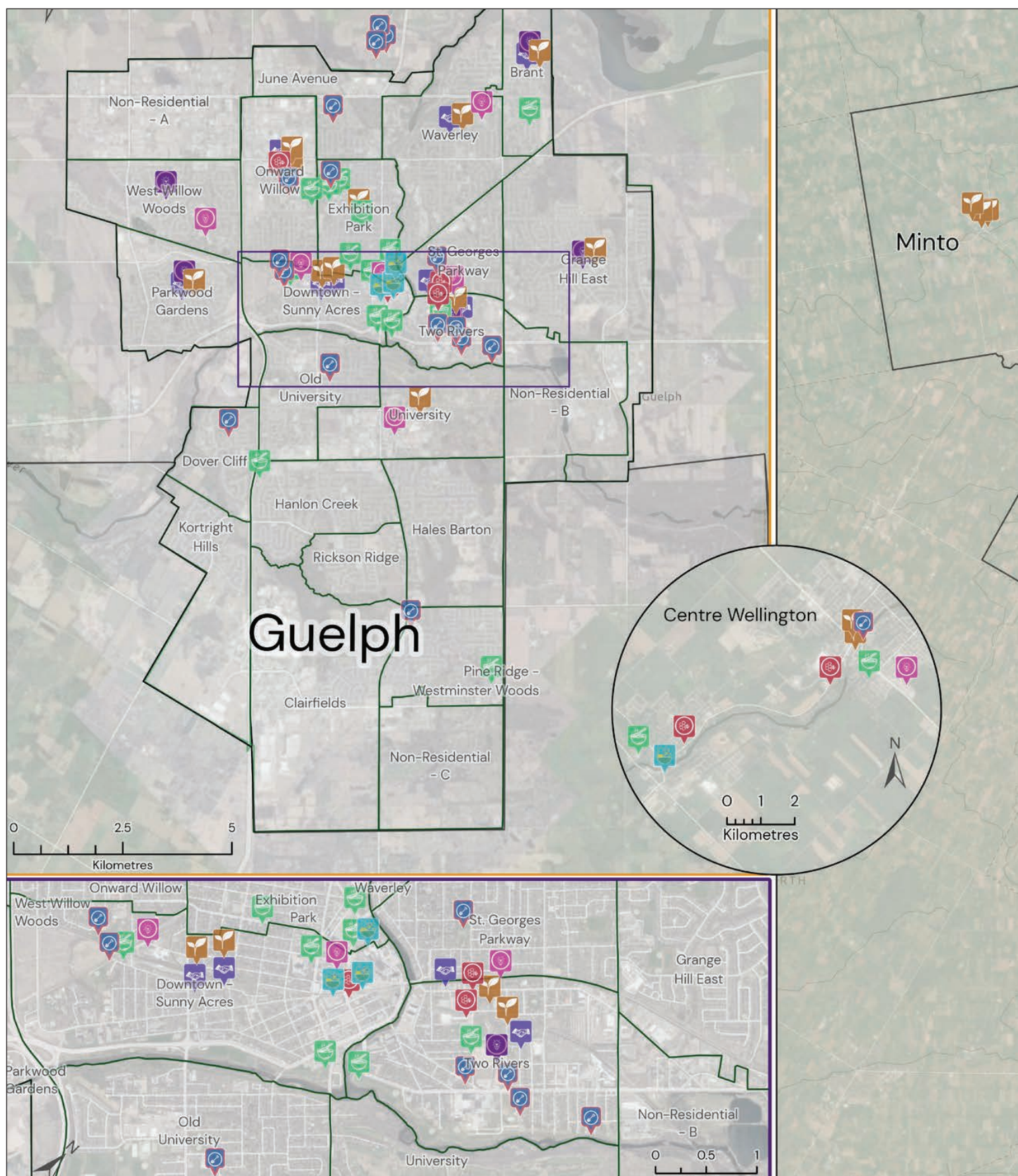
More information about these and other lessons we learned is available on our [website](#).

Appendices

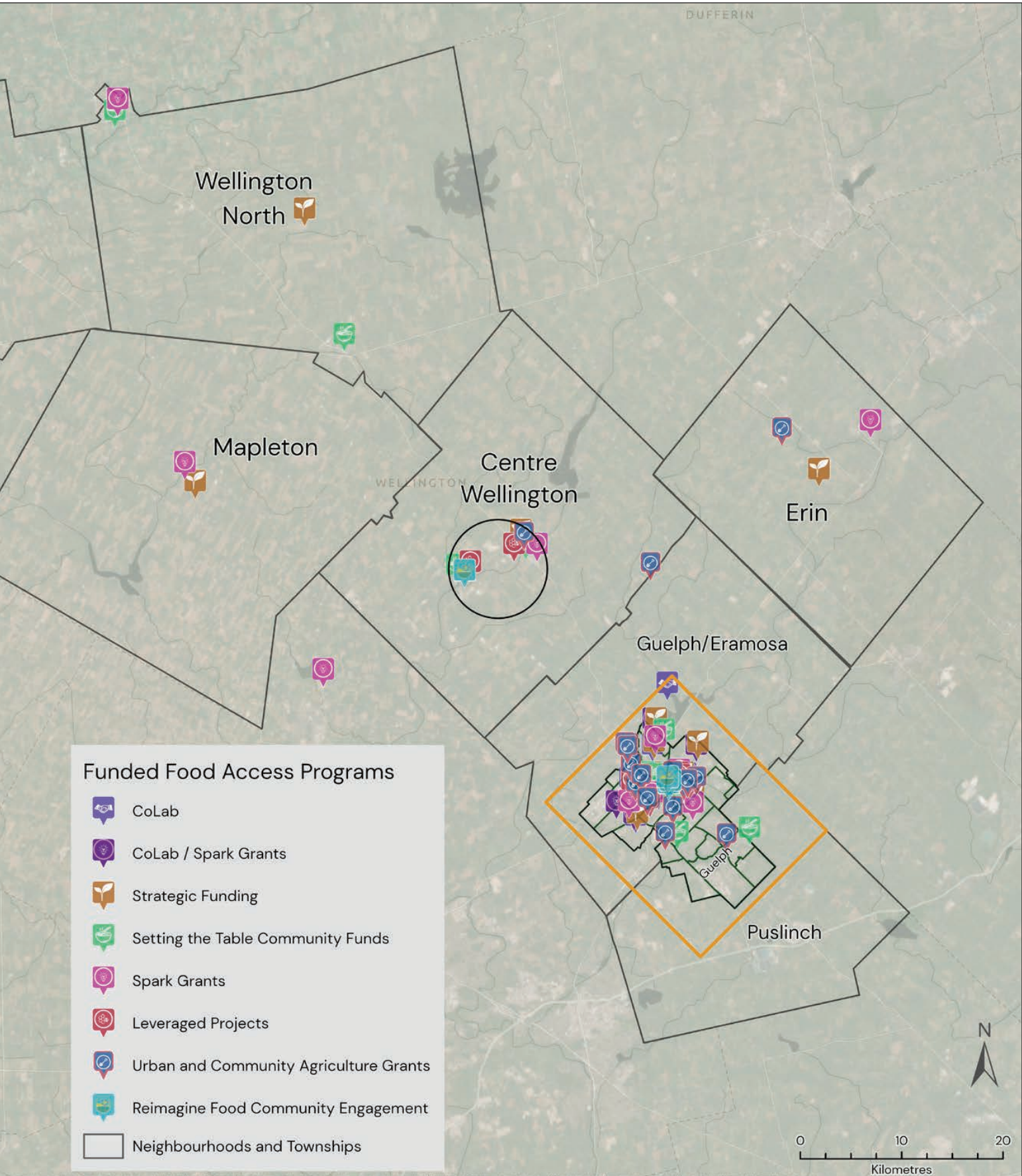


- I - Regionally funded programs to promote access to affordable, nutritious food (Map)
- II - Regionally funded programs to promote circularity in enterprises
- III - Geographic reach of Our Food Future and COIL programming
- IV - Description of Goals, Outcomes, KPIs and Methodologies

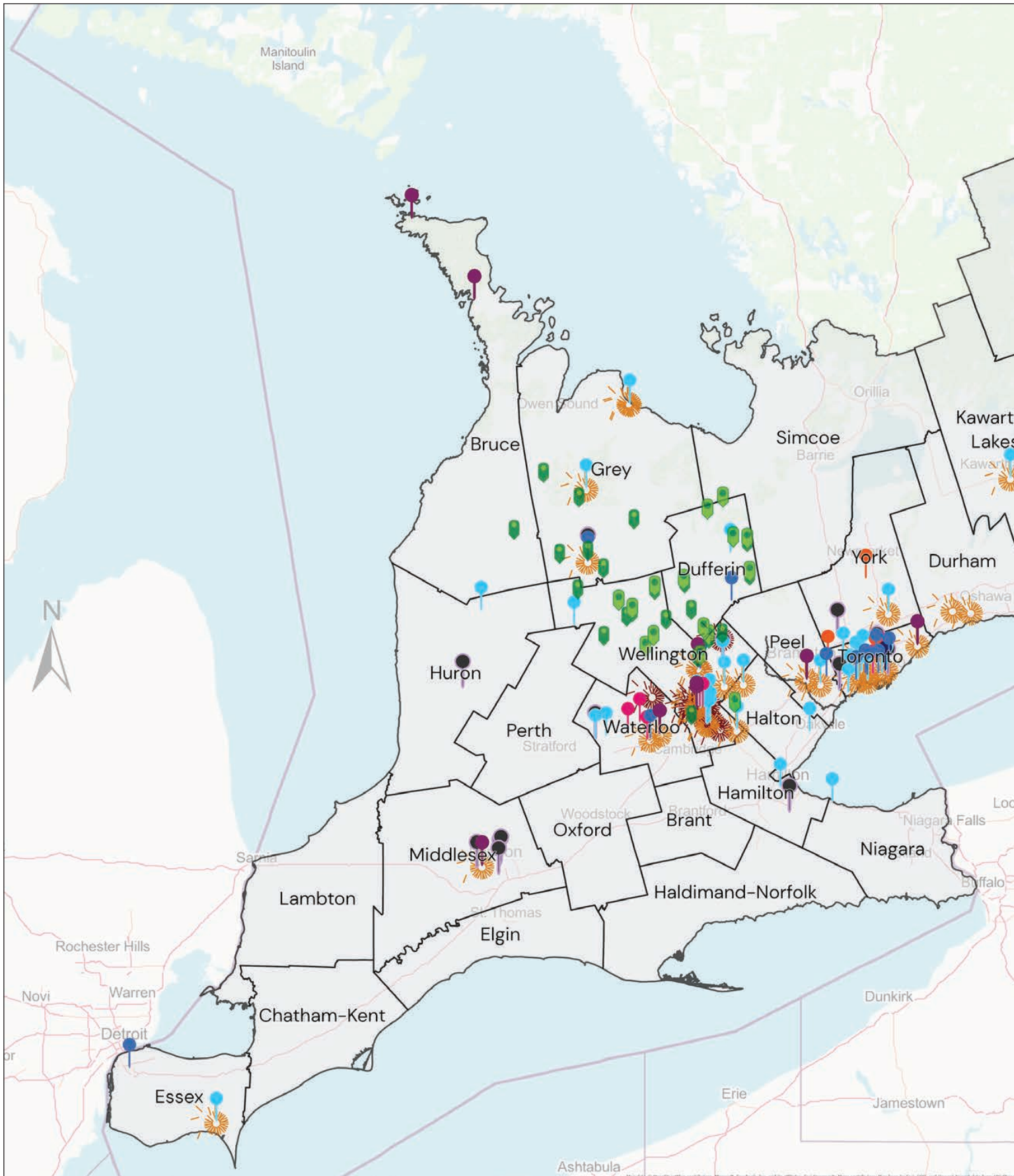
Appendix I



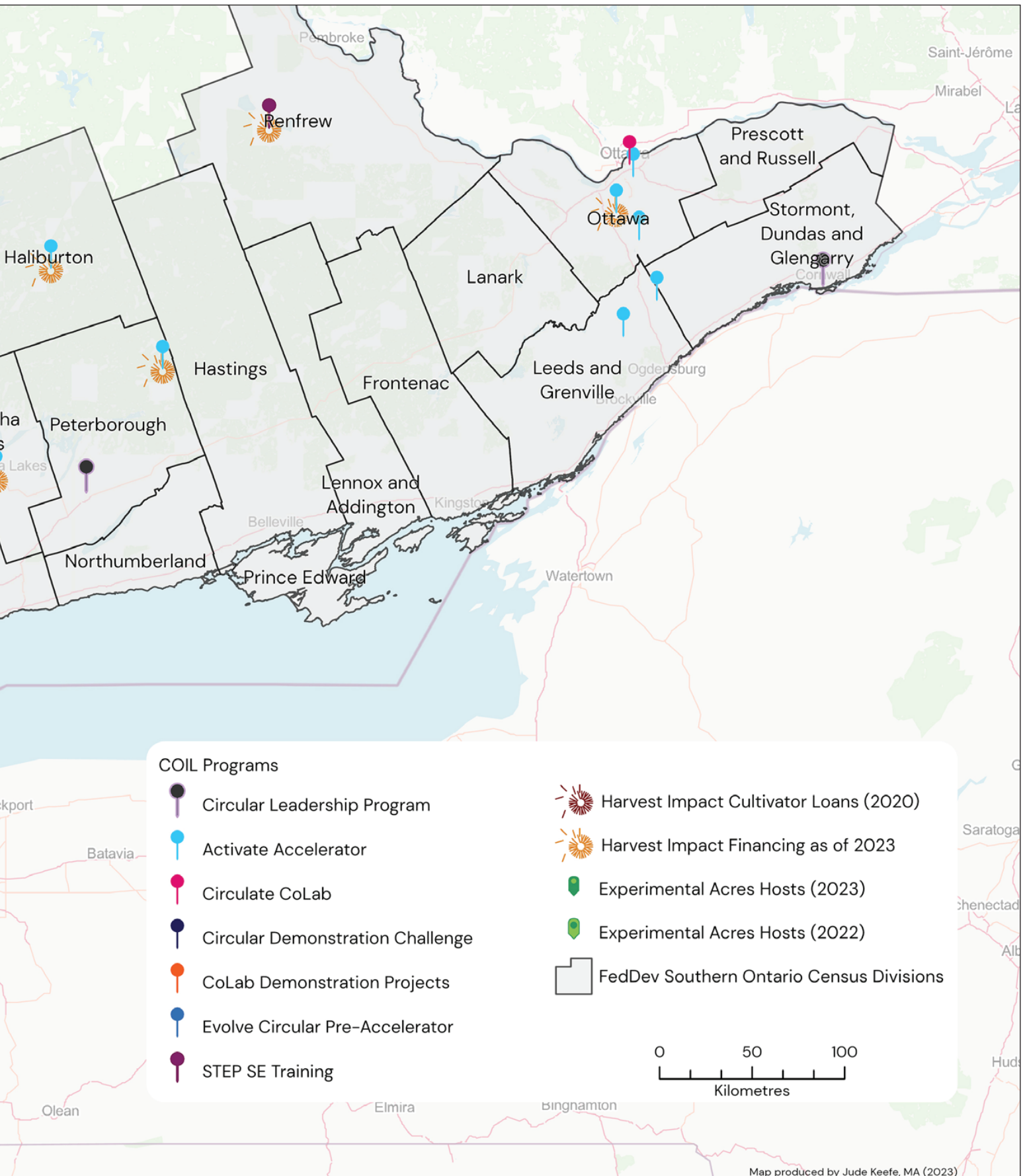
Over 60 regionally funded programs to promote access to affordable nutritious foods



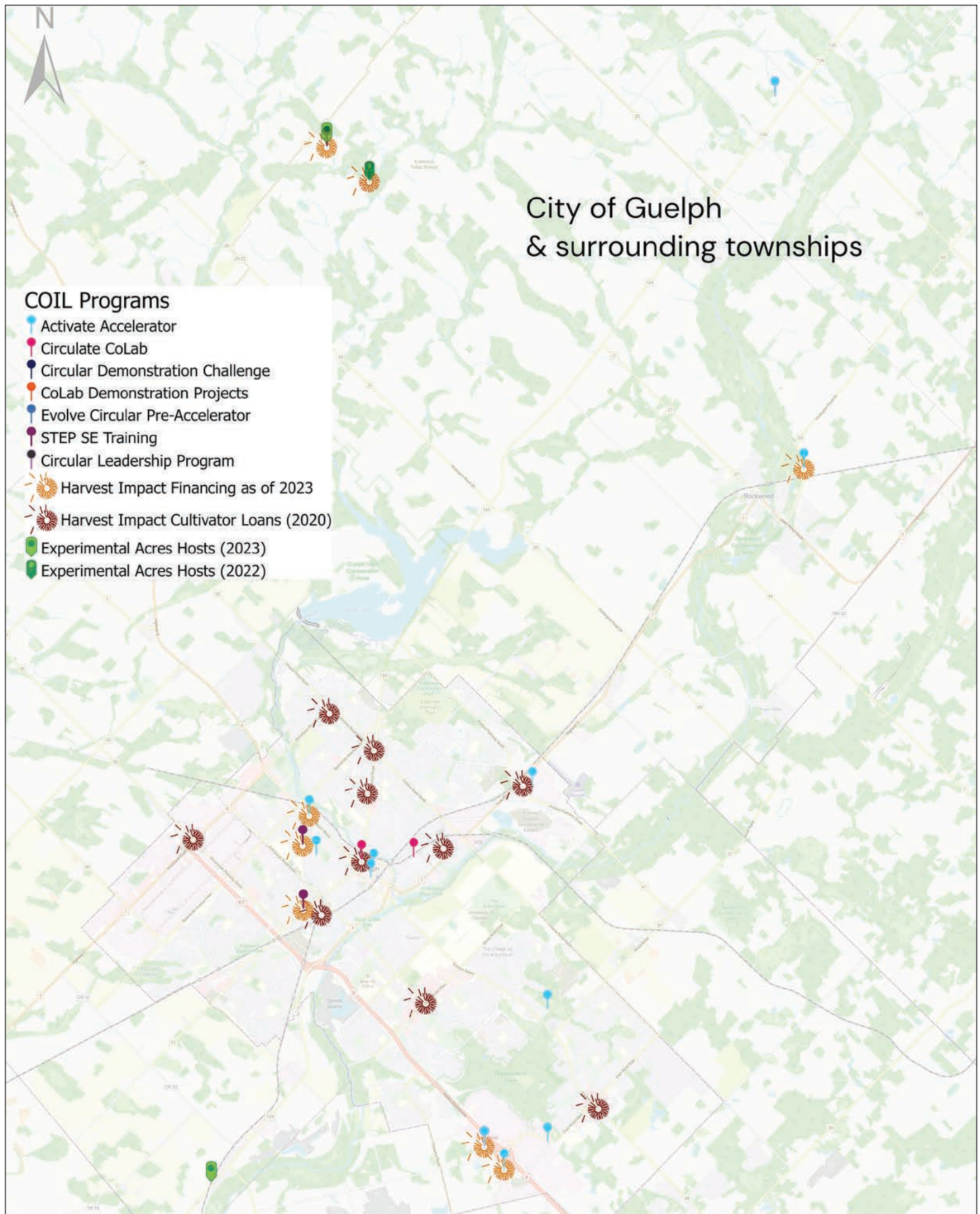
Appendix II



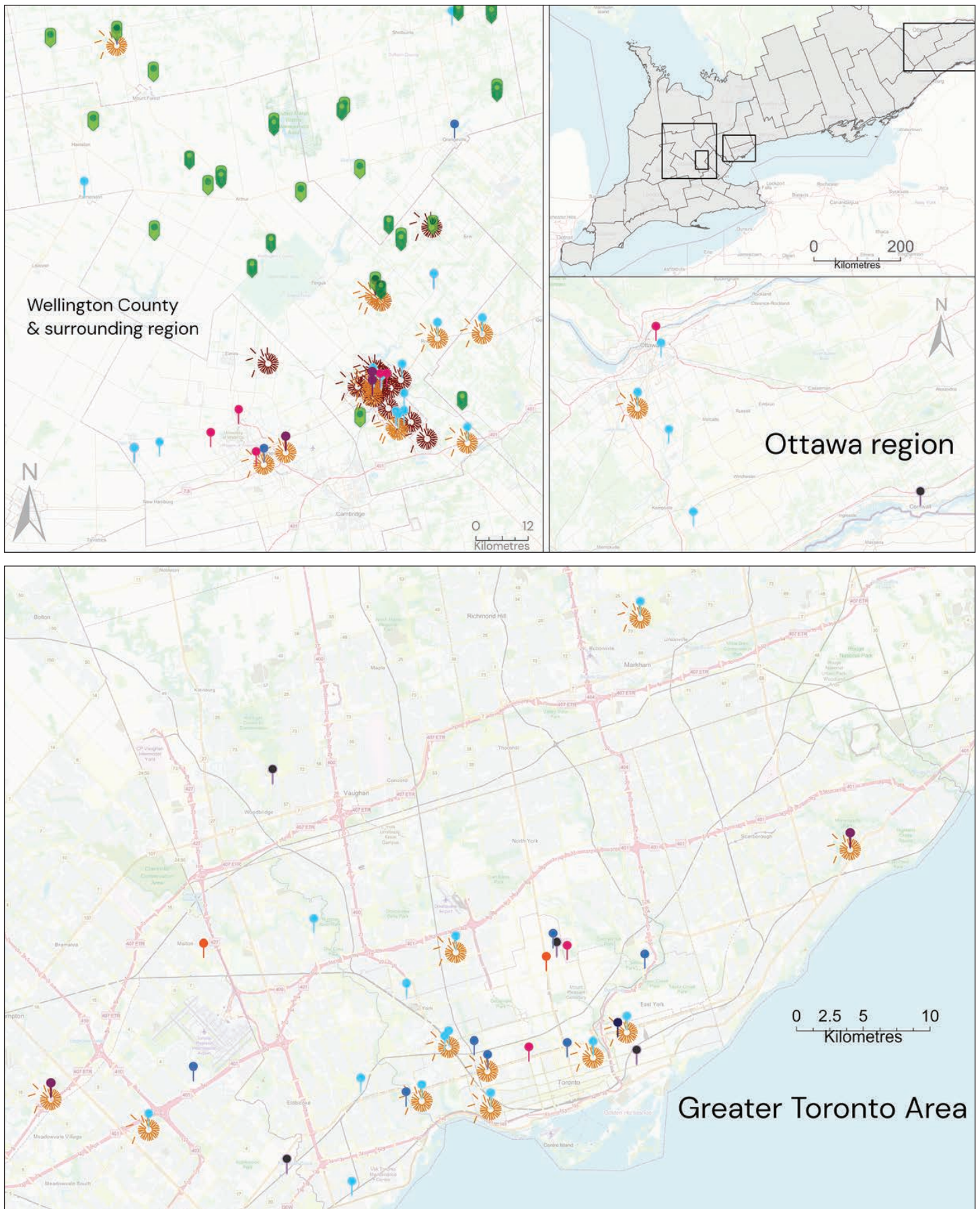
Regionally funded programs to promote circularity in enterprises



Appendix III



Geographic reach of Our Food Future and COIL programming



Appendix IV

Description of Goals, Outcomes, KPIs and Methodologies

Outcome		Key Performance Indicator (KPI)	Methodology
#1	GOAL: 50% Increase in accessibility of affordable nutritious food	Percentage change (%) in number of neighbourhoods without physical access to affordable, healthy food options.	GIS technology was used to overlap neighbourhood mapping data with physical assets to assess the current status of access to affordable, nutritious food options. Four townships in Wellington County and six neighbourhoods in the City of Guelph were identified as geographic priorities with more limited physical access to affordable, healthy food options. Our Food Future aimed to support programs serving at least 50% of the geographic priority neighbourhoods. To obtain the KPI for this goal, we report the % of these geographic priority neighbourhoods that were served by Our Food Future programming to support access to affordable, nutritious foods.
		Percentage change (%) of residents reporting improved access to affordable, healthy food options, by neighbourhood.	Programs surveyed their participants to understand if the program has improved access to affordable food options. Survey data collection occurred at each quarter to understand the % of respondents who stated that their access has increased. Cumulatively, we looked at the net change from the initial survey to present and averaged the in-between collections.
#2	GOAL: 50 new circular economy businesses and collaborations launched	# of new and existing businesses and collaborations that embed circular business models into operations.	We included new businesses that are circular from the outset, existing businesses that pivoted to integrate circularity, and circular collaborations. The circular business models included practices such as (but not limited to) employing circular design principles to reduce waste and energy consumption, using regenerative materials in production, rescuing and redistributing edible food, recovering waste, and programs that enable shared ownership.
#3	GOAL: 50% increase in circular economic benefits by unlocking the value of waste	% increase in combined value of both revenues and cost savings realized from unlocking the value of waste by social enterprises and businesses	<p>We set a baseline of zero, and assumed that at the point a social enterprise or business initiated their participation with the Our Food Future program, no economic value was being generated from waste.</p> <p>The formula we used to calculate economic value was: = Cost savings + Revenue generated as a result of involvement with Our Food Future programs.</p>

Outcome		Key Performance Indicator (KPI)	Methodology
#4	Greater skills and knowledge to support sustainability of circular economy	Number of businesses and collaborations to report change in practices	Surveys were administered to businesses participating in Our Food Future and COIL programs. The businesses reflected on whether the program had equipped them with greater skills and knowledge in the circular economy and if they had changed their practices to become more circular.
#5	Increased capacity to adopt technology and use data to support circular business model	Number of businesses and collaborations to report increased capacity and data/technology use	Surveys were administered to participating businesses who reflected on whether the program had increased their capacity and data/technology use in support of the circular economy.
#6	Decrease in amount of waste generated	% Decrease in amount of food waste generated by business	<p>This KPI illustrates the program's support in decreasing a business' operational food waste.</p> <p>The baseline for the decrease in the amount of waste generated for this work was set at zero, suggesting that when a processing or manufacturing business began participating in an Our Food Future program, there was a zero per cent decrease in the amount of waste generated by the business (i.e., they weren't actively trying to decrease their waste).</p> <p>The total volume of waste occurring in the business was estimated at each participating business and following implementation of the waste reduction opportunities. Additionally, the percentage change of actual waste reduction was calculated (i.e., the percentage decrease in the amount of waste identified compared to the waste reduction observed by implementing the intervention suggested by the program).</p> <p>Targets were established through a national study that estimated the average waste from 50 Canadian food processing/manufacturing facilities. The findings from this study identified that on average a typical food processing facility will waste approximately 186,000 kg/year, a value to the business of \$228,000/year.</p>

Outcome		Key Performance Indicator (KPI)	Methodology
#6	Decrease in amount of waste generated	% decrease in amount of household food waste generated – County of Wellington	The County of Wellington household waste data was tracked and evaluated by weight via a semiannual external waste audit.
		% decrease in amount of household food waste generated – City of Guelph	Through a partnership with the University of Guelph's <i>Guelph Family Health Study</i> , 40 families were engaged in an 8-week sustainable eating intervention program called "Supper Heroes". The Supper Heroes program teaches children sustainable meal planning, food storage, and how to use leftovers. It also engages them in challenging the rest of the family to different "missions" related to sustainable eating behaviours. Participating families were also given toolkits equipped with items that help support reducing food waste at home, such as a food storage wheel, beeswax wrap kit, cooking with leftovers cookbook, and more. Families tracked their food waste at the beginning and end of the intervention with food scales to assess if the intervention supported food waste reduction.
#7	Increase in amount of waste diverted from landfill	% increase in amount of food waste generated by households diverted from landfill – County of Wellington	The County of Wellington household waste data was tracked and evaluated by weight via a semiannual external waste audit.
		% increase in amount of food waste generated by households diverted from landfill – City of Guelph	<p>With support from a consultant on the Behavioural Insights Team (BIT), we developed an intervention to encourage residential curbside waste sorting, that was integrated into the City of Guelph's curbside waste cart inspection program.</p> <p>Staff inspected waste carts on collection day in selected neighbourhoods to evaluate sorting and to provide feedback to residents. This intervention tested adding several elements to the program to further encourage diversion. Households selected for the program were split into three treatments:</p> <ol style="list-style-type: none"> 1. Baseline Program. 2. Baseline Program + Gold Star, 3. Baseline Program + Gold Star + Prize Draw.

Outcome		Key Performance Indicator (KPI)	Methodology
#7	Increase in amount of waste diverted from landfill	% increase in amount of food waste generated by households diverted from landfill – City of Guelph	Households in treatments 2 and 3 were provided with updated communications materials that were amended based on proven Behavioural Insights concepts that support behaviour change. In addition, households in treatments 2 and 3 were given information at the start of the program that explained if waste carts were properly sorted, residents could get gold stickers on their bins to indicate they are good waste sorters. Treatment 3 households were also notified that they were eligible to enter a prize draw if they obtained a gold sticker on their bins. The waste carts of all households were inspected weekly on collection day for 4 weeks, and sorting compliance was rated on a scale between 1 (totally compliant) to 3 (non-compliant). The performance was evaluated for households over time and compared between the treatments to assess if the program supported additional waste diversion.
		% increase in amount of food waste generated by business diverted from landfill	This metric calculates the total food waste businesses participating in Our Food Future / COIL programs reported that was diverted from landfill to: <ul style="list-style-type: none"> • Food rescue organizations for redistribution or • Alternative processing facilities such as farms to feed livestock, composting and biogas production.
#8	Increased awareness and engagement in Our Food Future	Number and range of network partners	<p>We reported a cumulative total of the number and range of partners every 6 months. The definition of partners included:</p> <ul style="list-style-type: none"> • Expert Advisors: Provide guidance and advice, mobilizing knowledge networks to support implementation. • Delivery Agents: Agencies and individuals who deliver or support the delivery of programs or projects. <p>The baseline number of partners was set at 162.</p> <p>The baseline for the range of partners was set at 9 sectors.</p> <p>The definition “range” included a list of sectors that partners represented. The baseline included: academia, agri-food, architecture, commerce, construction, communications, energy, engineering, government, manufacturing, non-profit, professional services, and sustainability. The baseline partners and the range of partners were the partners that were engaged throughout the application process prior to implementation of any initiatives.</p>

Outcome		Key Performance Indicator (KPI)	Methodology
#8	Increased awareness and engagement in Our Food Future	Number of external presentations and publications	Total number of presentations delivered by staff from the Smart Cities Office on circular economy topics, the total number of participants at those presentations, as well as total number of publications referencing the program. We reported a cumulative total of these metrics every 6 months.
		% of partners to reporting awareness towards food access, waste, and associated cost savings	Communications and engagement opportunities (programs, services, policies, etc.) were implemented to raise awareness about food system issues including food access and waste. We developed and distributed a survey to 181 partnering organizations to set a baseline understanding. Since the project has been active for two years, the survey data provides an indication of the efficacy of the information and knowledge sharing that has occurred to date. We conducted an end of program survey with partners to understand if awareness had increased overall.
		% of residents reporting awareness towards food access, waste, and associated cost savings	<p>Reimagine Food campaign communications activities and engagement programs surveyed participants to understand if the program has raised awareness about food access, waste, and associated cost savings. We used the first round of survey data to set the baseline.</p> <p>Programs continued to survey their participants and new programs were introduced. Each quarter as data collection happened the % of respondents stating their awareness has improved could have been higher or lower than the baseline – final collection will look at the net change from baseline to present and average the in-between collections – ideally showing an increase in the number of participants who strongly agree and agree that the programs improved their awareness of food system issues.</p> <p>The survey data provided an indication of the efficacy of knowledge. This survey asked questions to gauge awareness on a Likert scale (Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree, Not Applicable) of the circular food economy; challenges some residents face accessing affordable, nutritious food in the Guelph Wellington region; local and global impacts of food loss and waste.</p>

Outcome		Key Performance Indicator (KPI)	Methodology
#8	Greenhouse Gas Emissions (CO2)	Total tonnes of greenhouse gas emissions (CO2) reduced from program activities	<p>Greenhouse gas calculations are based on food loss and waste prevention and diversion. We reported tonnage of food loss and waste that has been prevented (businesses and County households), upcycled into new products (businesses), or diverted from landfill (businesses and County households).</p> <p>PREVENTION: When food is wasted, all the money, energy, water, and other resources that have been used to produce the food are also wasted. Therefore, by reducing food waste, we can also reduce the amount of resources lost in its production, processing and distribution. To calculate the GHG emissions savings from food waste reduction, we used an online calculator that assesses prevention outcomes which are far more significant than upcycling or diverting food waste.</p> <p>UPCYCLING: Upcycling is the process of transforming by-products, waste materials, useless, or unwanted products into new materials or products perceived to be of greater quality. This metric encompasses the tonnes of food by-products identified to create a new product that was sourced and produced using verifiable supply chains and have a positive impact on the environment.</p> <p>DIVERTED: Once we have established the total tonnes of wasted food upcycled or diverted, we use Environment and Climate Change Canada's greenhouse gas (GHG) Calculator for Organic Waste Management to estimate the impact on GHG emissions of our organic waste management approaches. Both the City of Guelph and County of Wellington divert source-separated organic waste to regional private and public composting facilities.</p>

Natures
FlaiR



TRY IT
TODAY!



ABOKICHI



GREAT
TASTE!

I CAN'T BELIEVE IT'S UPCYCLED!



SO
GOOD!

BRUIZED



LOVE
IT!

GREEN
BOWL

Contact information

To learn more about the projects in this report please contact us at:

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