Stronger Together

MIC 2023 Annual Impact Report

MIC
municipal
innovation
council

Waste Management

In 2023, the MIC partnered with Food Cycle Science, a Canadian clean-technology company, to launch a FoodCycler™ Pilot Program designed to measure the viability of on-site food waste processing technology as a method of waste diversion.

In May, a County-wide program was launched that included 880 participating households, 420 of which were subsidized by the MIC to make this technology accessible to more Bruce County residents at an affordable price.

The 420 FoodCyclers™ subsidized by the MIC will divert 116.3 metric tonnes of food waste from local landfills per year—the equivalent reduction in greenhouse gas emissions from taking ***29.3 gasoline-powered vehicles off the road every year!***

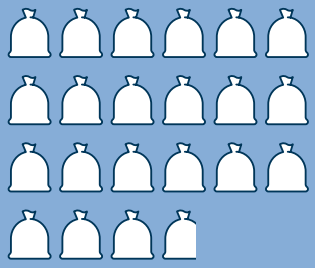
FOODCYCLER

- ✓ reduces food waste in landfills
- ✓ takes more trucks off the road
- ✓ reduces infrastructure and collection costs
- ✓ contributes to a 95% reduction in CO2e compared to sending food to landfills

Participating Municipality	MIC Funded FoodCyclers	Municipally Funded FoodCyclers	Total	Food waste diverted from the landfill per year (MT)	CO2e emissions avoided per year (MT)
Arran-Elderslie	62	0	62	17.2	19.4
Huron-Kinloss	70	60	130	36.0	40.7
Kincardine	70	140	210	58.2	65.7
Northern Bruce Peninsula	70	60	130	36.0	40.7
Saugeen Shores	116	200	316	87.5	98.9
South Bruce	32	0	32	8.9	10.0
MIC Contribution			**420**	**116.3**	**131.5**
All of Bruce County			**880**	**244.2**	**317.4**

FoodCycler™ Feedback

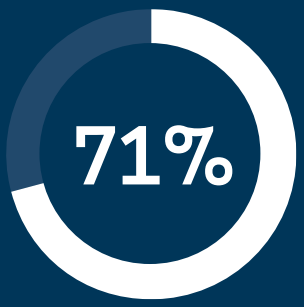
Residents that participated in the pilot program reported:



They generated 0.42 fewer standard garbage bags per week—**a reduction of 21.8 garbage bags per household**, per year!

"My garbage reduced to 1 regular bag every 3 weeks—I LOVED THIS MACHINE!"

Saugeen Shores resident



Their increased awareness of food waste **motivated them to waste less food.**

"The FoodCycler definitely showed me how much food waste we have in our household. This awareness has motivated me to plan better to minimize food waste."

Kincardine resident

They **will continue to use the FoodCycler**™ after the pilot program ends.

"Highly recommend! I know of people that wanted one, but none left at township to purchase."

Huron-Kinloss resident

"At Food Cycle Science, we are committed to changing the way the world thinks about food waste. This forward-thinking program empowers Bruce County residents to take ownership over their food waste and support their community's sustainability goals. ***The MIC's support has made an invaluable impact*** *already and this is just the beginning!"*

Jessica Taylor
Municipal Program Manager, Food Cycle Science

FOODCYCLE SCIENCE

Smart Beach – Year 2

The second year of the Smart Beach program has focused on research and development that will guide the implementation of a dynamic warning system at Station Beach in Year 3.

Through physical and social surveys, implementation of Machine Learning models, and creation of a locally calibrated wave and current model, project milestones reached this year have provided significant insight on beach-user behaviour and timing and location of surf related hazards. Historical and real-time data can be freely accessed by the public through the Seagull – Great Lakes Observing System.

In year three, this data will be used to implement a spatially and time dependent warning system that will notify beach-users where and when dangers may be present and to further promote safety at Station Beach.

Buoy recording wave, current, lake temperature, and weather conditions offshore of Station Beach.

Heavy Surf Conditions and Rip Current along the Southern Jetty.

A roadmap for Machine Learning models was developed to predict surf hazards including providing beach-user counts. This also includes the ability to predict the surf conditions at Station Beach from a network of offshore wave buoys and regional Met stations.

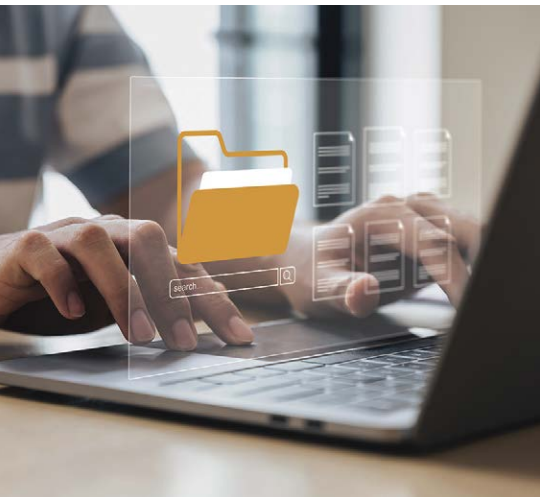
Predictors such as offshore wind conditions are used to forecast surf-related hazards (e.g., significant wave heights and current velocities at depth) recorded offshore. The goal is to extend these hazard predictions to sections of the coast that do not have access to a local buoy on-site.

Forward Thinking

The Municipal Innovation Council is investing in innovative solutions that create long-term value. Innovation demands that organization learn to think creatively to be able to bring about new products, services and approaches.

Some of the projects underway include:

1 Information Technology

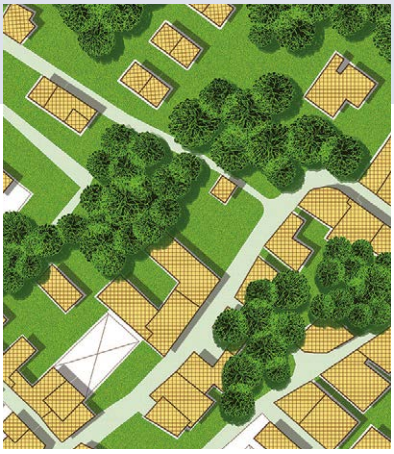


"The Joint IT Steering Committee has created a supportive membership of the individuals involved with IT across Bruce County. Sharing of knowledge, ideas and peer support are the largest value items recognized by the membership, as many members are the sole provider of this function in their organization. Members have also been able to recognize cost savings through sharing of purchasing program details and individual experiences. Cell phone pricing has provided further savings to municipalities."

Kara Smith
GIS/IT Manager, Municipality of Northern Bruce Peninsula

2 Topographical Mapping

The use of Ecopia technology land use polygons have provided to be very beneficial. This is an important resource for tree cover analysis in our municipalities. Another feature is the elevations and height details of building footprints as it enables rendering buildings in 3D with real dimensions. This creates a bridge polygon layer to replace what was previously merely a point layer of County bridges.



3 Sustainable Transportation Roadmap for the Electrification of Municipal Fleet

Plans are being developed to create a Sustainable Transportation Roadmap for the Electrification of Municipal Fleet. To reduce greenhouse gas emissions and promote sustainable practices, the electrification of municipal fleets has emerged as a significant area of priority. The project aims to evaluate the feasibility, benefits, and challenges associated with transitioning municipal fleets to electric vehicles, contributing to a greener and more environmentally friendly transportation system.

4 Real-Time Road Condition Reporting Development

By harnessing the power of data, connectivity, and advanced analytics, the MIC seeks to revolutionize the way road conditions are monitored, communicated, and managed. Emphasizing the enhancement of transportation efficiency, improvement of safety and optimization of infrastructure utilization.

5 Building Bench Strength

The Municipal Innovation Council has invested in municipal staff training and development in areas of:

Building Project Management Excellence

The program aims to equip municipal employees with the necessary skills, knowledge, and tools to effectively plan, execute, and deliver projects in a structured and efficient manner. By investing in this training, we aim to enhance project outcomes, improve resource utilization, and strengthen the overall project management capabilities within our organization.

Customer Service Enhancements and Reporting

Customer service plays a vital role in ensuring customer satisfaction and building long-term relationships. This project aims to implement customer service enhancements and develop a comprehensive reporting system to monitor and improve the quality of customer service interactions. By focusing on both enhancing the customer experience and tracking performance metrics, the organization can drive continuous improvement and deliver exceptional service.

Municipal Inclusivity and Diversity Plan

Promoting inclusivity and diversity within municipal settings is crucial for fostering equitable and thriving organizations. This project plan aims to develop and implement a comprehensive Municipal Inclusivity and Diversity Plan that addresses key areas such as policies, programs, and initiatives to ensure equal opportunities, representation, and respect for all employees.

About the MIC

The Municipal Innovation Council was established in 2020 when seven municipalities in the County of Bruce came together to find savings, efficiencies and deliver services better to their residents — all with the goal of building smarter, stronger, more resilient communities.

PREPARED BY

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