



# FOODCYCLER™ MUNICIPAL SOLUTIONS

The Future of Food Waste.



# ABOUT US

## Food Cycle Science

- **Canadian company** based out of Ottawa, ON
- Founded in Cornwall in 2011 – Company is 100% focused on **Food Waste Diversion Solutions**
- Products available in North America through **FoodCycler Municipal / Vitamix** and internationally through network of distributors & OEM partners
- **Finalists** in Impact Canada/AAFC's **Food Waste Reduction Challenge**
- **Globe & Mail** Canada's **Top Growing Companies** (2021 & 2022)
- **Deloitte Fast 50 CleanTech** award winners (2021)
- **Approved supplier** with Canoe Procurement Group of Canada



# TRUSTED CANADIAN SOLUTION

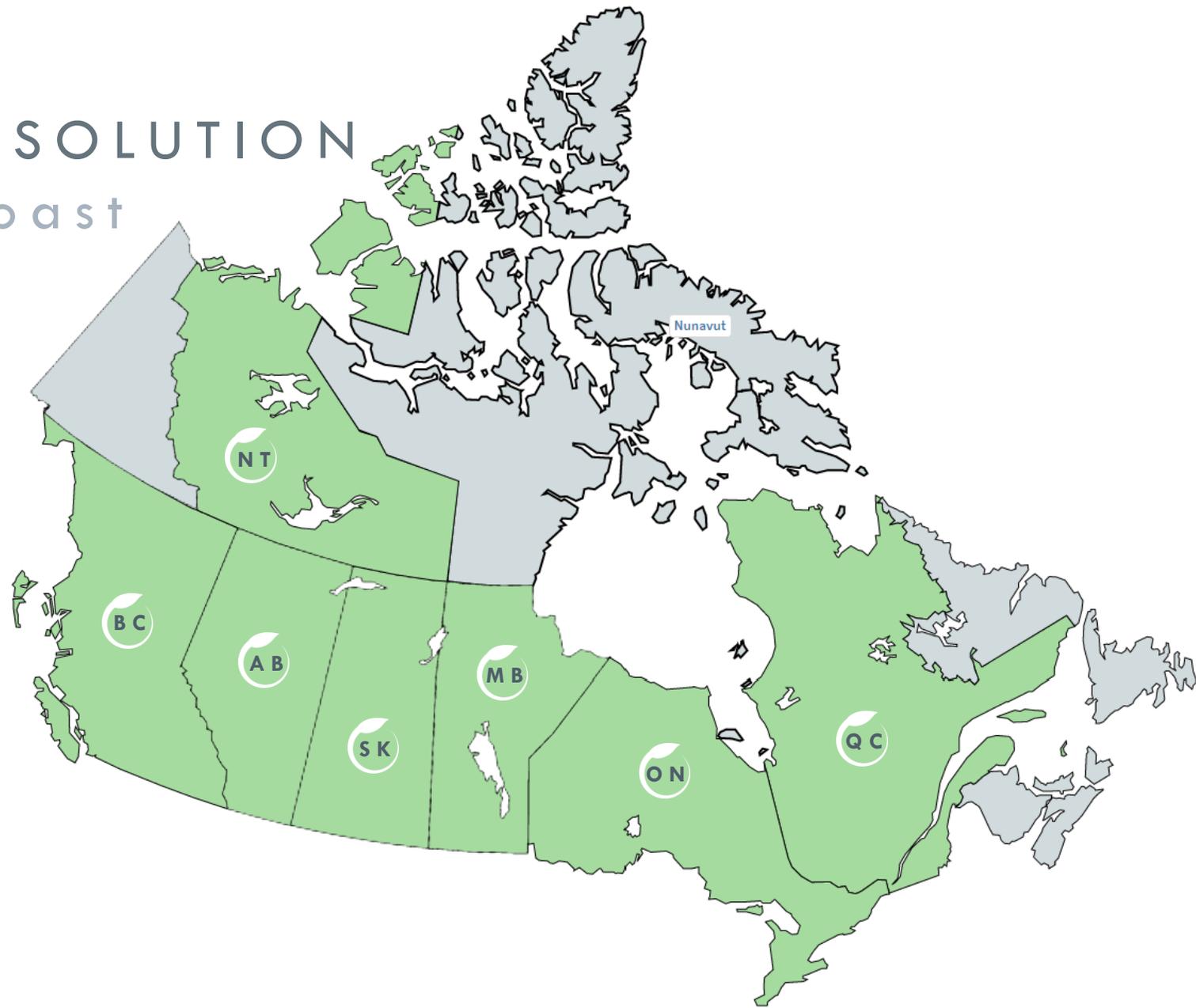
Coast to Coast to Coast

# 72

## Canadian Municipal Partnerships

○ **6** Provinces

○ **1** Territory



# THE PROBLEM – FOOD WASTE

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- **63%** of food waste is avoidable
- Household waste is composed of **25-50%** organic waste
- Food waste weight is up to **90%** liquid mass (which is heavy)
- The average Canadian household spends **\$1,766** on food that is wasted each year
- Each year food waste in Canada is responsible for **56.6 Million tonnes of CO2** equivalent of GHG



# MUNICIPAL IMPACT

## Waste is a municipal responsibility

### LANDFILL + WASTE COSTS

- ~**25-50%** of household waste is organic waste
- Landfills are filling up fast, creating cost and environmental issues
- Hauling, transfer, and disposal services are a major cost factor and environmental contributor

### ENVIRONMENT

- Landfilled organic waste produces methane, which is **25 times** more harmful than CO<sub>2</sub>
- 1 tonne of food waste is equivalent to 1 car on the road for one year



### COMMUNITY

#### Food in the garbage:

- More frequent collection or trips to the disposal site
- Unpleasant odours
- Animals, pests & other visitors



#### Removing food waste from garbage:

- Volume is reduced by up to 50%
- Less frequent collection, fewer trips to disposal site, save on bag tags
- Keeps odours out, makes garbage much less “interesting” for animals

# HAVEN'T WE SOLVED THIS ALREADY?



## GREEN BINS

- Preferred solution for **larger cities** where **dense housing** and large processing facilities generate **economies of scale**
- **Contamination** is an ongoing challenge
- GHG emissions from curbside collection
- **Safety** concerns from additional trucks on the road



## BACKYARD COMPOST

- **Cost-effective** but can be **labor-intensive** also
- May attract pests/animals or create unpleasant **odors**
- Most users **do not compost in winter** or inclement weather
- **Adoption rates are relatively low and stagnant**



## LANDFILL

- **Easiest solution** and often perceived as the most cost-effective in the short term
- Waste is typically **out of sight and out of mind** for consumers
- High levels of GHG emissions, particularly **methane**
- Long-term **environmental hazard** requires monitoring / maintenance

# THE FOODCYCLER PRODUCT FAMILY

**FOODCYCLER™  
FC-30**



**FOODCYCLER™  
MAESTRO**



2.5 L	VOLUME CAPACITY	5.0 L
30.5 L	UNIT VOLUME	28.9 L
4-8 HOURS	PROCESSING TIME	6-8 HOURS
0.8 kWh	POWER CONSUMPTION PER CYCLE	1.3 kWh
2 REFILLABLE FILTERS	ODOUR CONTROL	1 REFILLABLE FILTER
BACK	VENT LOCATION	TOP

# THE SOLUTION

## IN THREE SIMPLE STEPS



**1.** Add waste to bucket

**2.** Add bucket to unit

**3.** Press Start. That's it!



Vegetable & Fruit Scraps



Starches



Most Animal Bones



Dairy Products



Tea bags & Coffee grinds



Egg shells

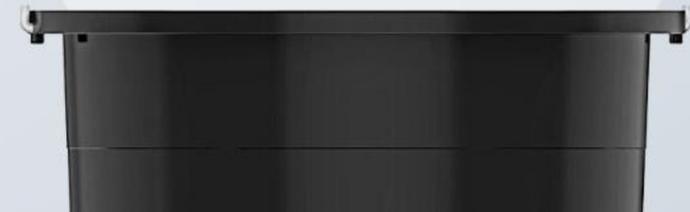


Nut shells, nuts & seeds



Meat, poultry & fish

The resulting by-product can be used in many applications.



# 90% FOOD WASTE REDUCTION

Full bucket of wet,  
smelly food waste

2.5L / 5L



Handful of dry, sterile, odourless  
& nutrient-rich by-product

100 g / 200 g



4-8 HOURS  
(Overnight)

0.8-1.5 kWh  
(Equivalent to a laptop)

\$0.10-\$0.15 per cycle  
(\$2-4 per month)

# FOODILIZER™ : BENEFICIAL USES

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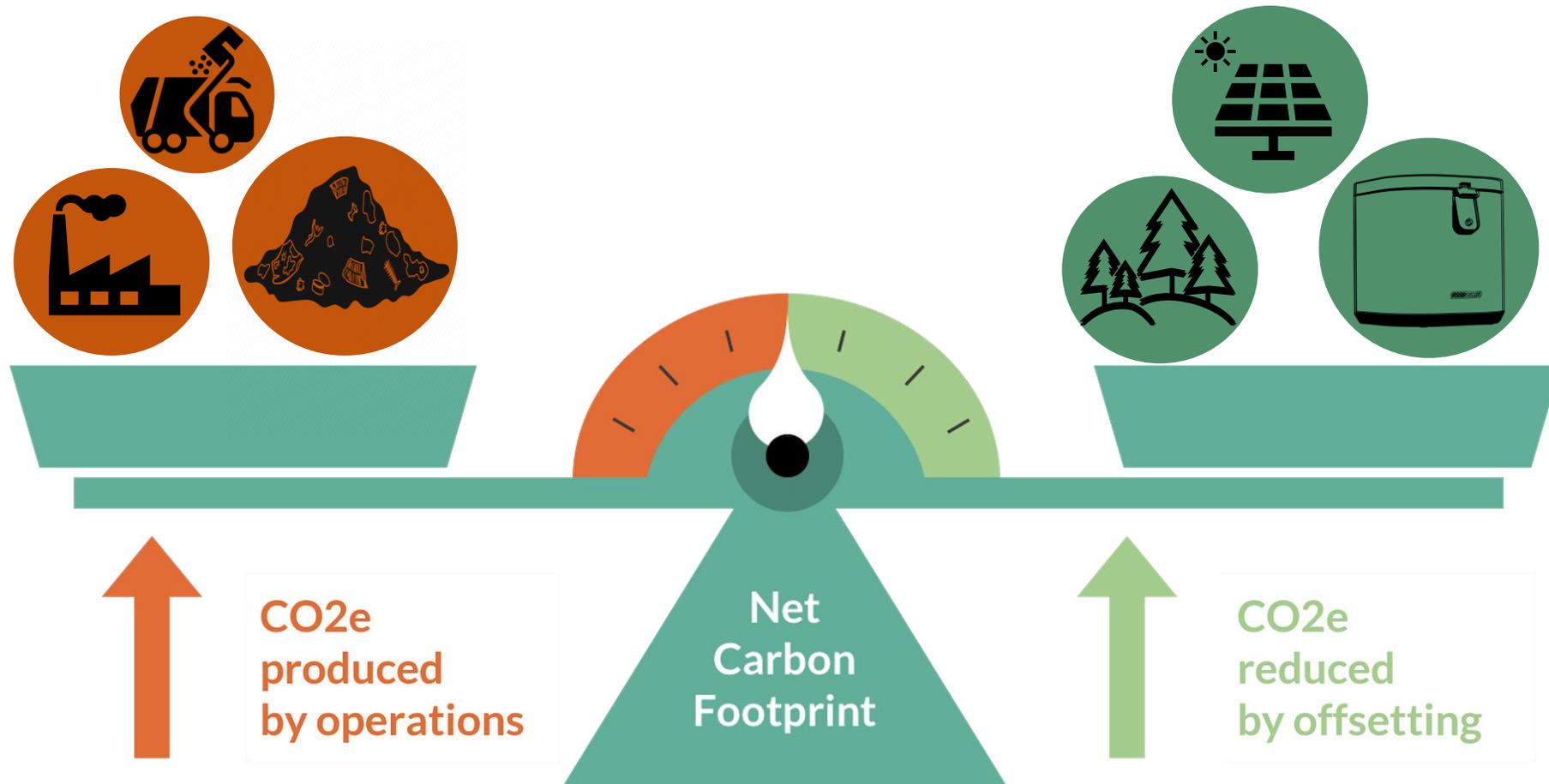
The FoodCycler by-product is a dry, sterile, odourless and nutrient-rich biomass with many beneficial uses and practical applications:

- Add to garden soil
- Add to backyard composter/tumbler/green cone
- Integrate to existing Leaf & Yard waste systems
- Pelletize/briquette as home heating alternative
- Drop off at compost site
- Drop off to a local farm
- Drop off to a community garden
- Add to Green Bin (where available)



# IMPACT: ENVIRONMENT

## The Path to Net Zero



# IMPACT: ECONOMIC

TRADITIONAL SERVICES



+



+



=

HAULING FEE

TRANSFER STATION OPERATION

DISPOSAL FEE

**EXPENSIVE,  
ONGOING,  
VARIABLE**

FOODCYCLER



=

NO TRANSPORTATION OR PROCESSING

**FIXED COST,  
HIGH YIELD,  
EFFECTIVE**

## IMPACT: SOCIO-ECONOMIC

Traditional organics collection methods often neglect communities with challenging infrastructure and limited resources (rural, remote, Northern, multi-residential, Indigenous, etc.).

With FoodCycler, the capital costs of developing processing and collection infrastructure are avoided, as is the time required before infrastructural maturity is achieved.

The FoodCycler provides a non-discriminatory means for ALL households to directly participate in organics diversion with minimal individual costs incurred.

All you need is a plug.

ALL YOU NEED  
IS A PLUG



# IMPACT: PRESSURE

## Regulatory + Social

### THE TIME IS NOW

- Constituents want **solutions** to reduce their environmental impact
- Waste is perceived as a government problem and **regulations** are coming
- Food waste is “low-hanging fruit” to achieving higher **diversion** and addressing the environmental impact of waste



*"I've received a number of positive messages from residents saying, "sign me up, where can I get mine." I'm 100 per cent in favor of it."*

**Deputy Mayor Lyle Warden, (South Glengarry ON)**

*"We were extremely happy with this program and loved that it made us aware of our daily waste."*

**Pilot participant in South Glengarry**

*"It's a great tool to reduce household waste. Appreciate that the municipality is being innovative and piloting different solutions."*

**Pilot participant in Hornepayne**

*"It alleviates a lot of the concerns that people might have with backyard composting. The time commitment, the location, pests and animals..."*

**Kylie Hissa, Strategic Initiatives Officer  
(Kenora, ON)**

# THE FOODCYCLER PILOTS

The results are in.

Completed pilots in:

**4700**

**Households**

**40**

**Municipalities**



**Participation Rate** **98%**

- 98% of pilot participants will continue using the FoodCycler after the pilot period

**Recommendation Rate** **96%**

- 96% of users would recommend the FoodCycler to friends/family/neighbours

**User Experience Rating** **4.6/5**

- 4.6 out of 5 star rating for the overall user experience of the FoodCycler

**Net New Diversion** **300 kg**

- Each participating household is estimated to divert approximately 300 kg of food waste per year

**Awareness + Prevention** **77%**

- 77% of pilot participants resolved to waste less food as a result of increased awareness

# FOOD WASTE REDUCTION CHALLENGE

## Impact Canada Finalists

### Federal Funding

- ✓ Semi-Finalists in Stage 1 received **\$100,000**
- ✓ Finalists in Stage 2 received **\$400,000**
- Finalists will compete in Stage 3 to win one of two Grand Prizes of up to **\$1,500,000**

IN PARTNERSHIP WITH:



# PILOT PROGRAM

12 Weeks from Start to Finish

## PILOT TIMELINE

### START

Residents purchase FoodCycler at a subsidized rate from Municipal Office (or other designated location)

### 12 WEEKS

Participants use the unit for a period of 12 weeks.

Number of cycles per week are tracked to estimate total diversion achieved.

### END

Participants fill out an exit survey, providing their review of the program and any other feedback.

Survey results used to evaluate program success.

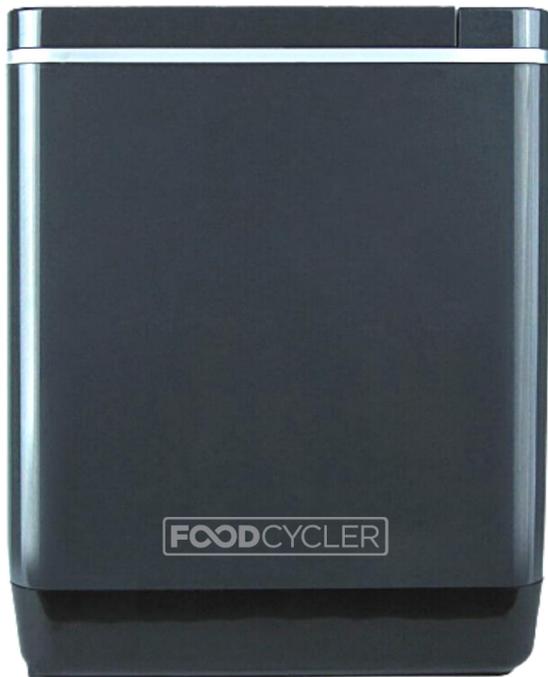
### NEXT STEPS

Tailored program design and implementation.

Grants may be available, with support from Food Cycle Science.

# FUNDED PILOT PROGRAM OPTIONS

## Municipal Subsidy Model



**FOODCYCLER™  
FC-30**

\$ 500

-\$ 200

-\$ 50

\$ 100

\$ 150

RETAIL PRICE

MUNICIPAL  
DISCOUNT

IMPACT CANADA  
INVESTMENT

\* MUNICIPAL  
SUBSIDY \*

RESIDENT  
COST

\$ 800

-\$ 250

-\$ 150

\$ 100

\$ 300



**FOODCYCLER™  
MAESTRO**

# FUNDED PILOT PROGRAM OPTIONS

## Pilot Scope Recommendations

Municipality Population	Pilot Scope	Municipal Investment
< 2,500 Residents	50 Households	\$5,000
2,500 – 10,000 Residents	100 Households	\$10,000
10,000 – 20,000 Residents	200 Households	\$20,000
> 20,000 Residents	250+ Households	\$25,000+

- **Plus shipping costs and applicable taxes**



# PARTNERSHIP BENEFITS

## Why pilot with us?

- 🍃 Opportunity to trial a food waste diversion solution at a **cost well below market prices**
- 🍃 Immediate impact of reduced residential waste volumes thus **increasing diversion rates**
- 🍃 **Reduced costs** associated with waste management (collection, transfer, disposal, and landfill operations)
- 🍃 The **reduction of greenhouse gas (GHG)** emissions from transportation and decomposition of food waste in landfills
- 🍃 Extend the **life of your landfill(s)**
- 🍃 Opportunity to support **Canadian innovation** and clean tech
- 🍃 Opportunity to provide **residents** with an innovative solution that reduces waste and fights climate change, at an affordable price
- 🍃 Obtaining **data** that could be used to develop a **future organic waste diversion program**





# THANK YOU!

## ANY QUESTIONS?

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