



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

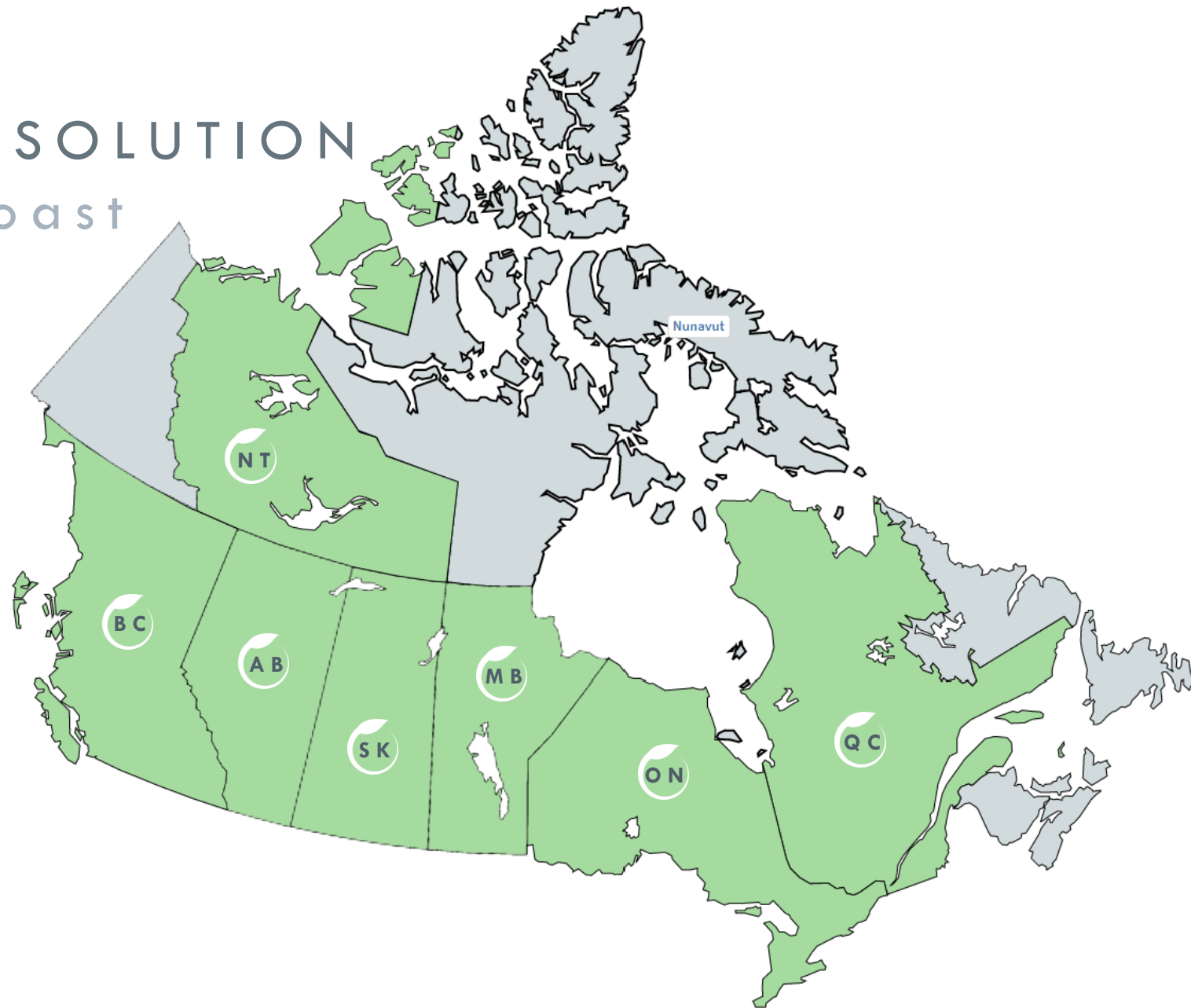
Coast to Coast to Coast

72

Canadian Municipal Partnerships

○ **6** Provinces

○ **1** Territory



THE PROBLEM – FOOD WASTE

- **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 CO₂
- 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**



2.5 L

30.5 L

4-8 HOURS

0.8 kWh

2
REFILLABLE
FILTERS

BACK

VOLUME CAPACITY

UNIT VOLUME

PROCESSING TIME

POWER CONSUMPTION
PER CYCLE

ODOUR CONTROL

VENT LOCATION

5.0 L

28.9 L

6-8 HOURS

1.3 kWh

1
REFILLABLE
FILTER

TOP

**FOODCYCLER™
MAESTRO**



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



Dairy Products



Starches



Tea bags & Coffee
grinds



Most Animal
Bones



Egg shells

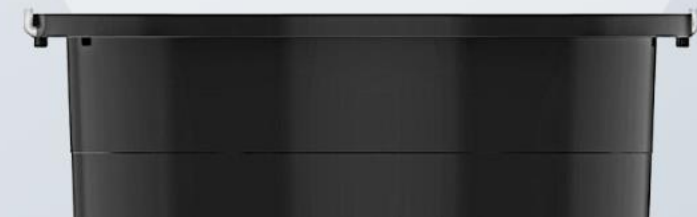


Nut shells, nuts
& seeds



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

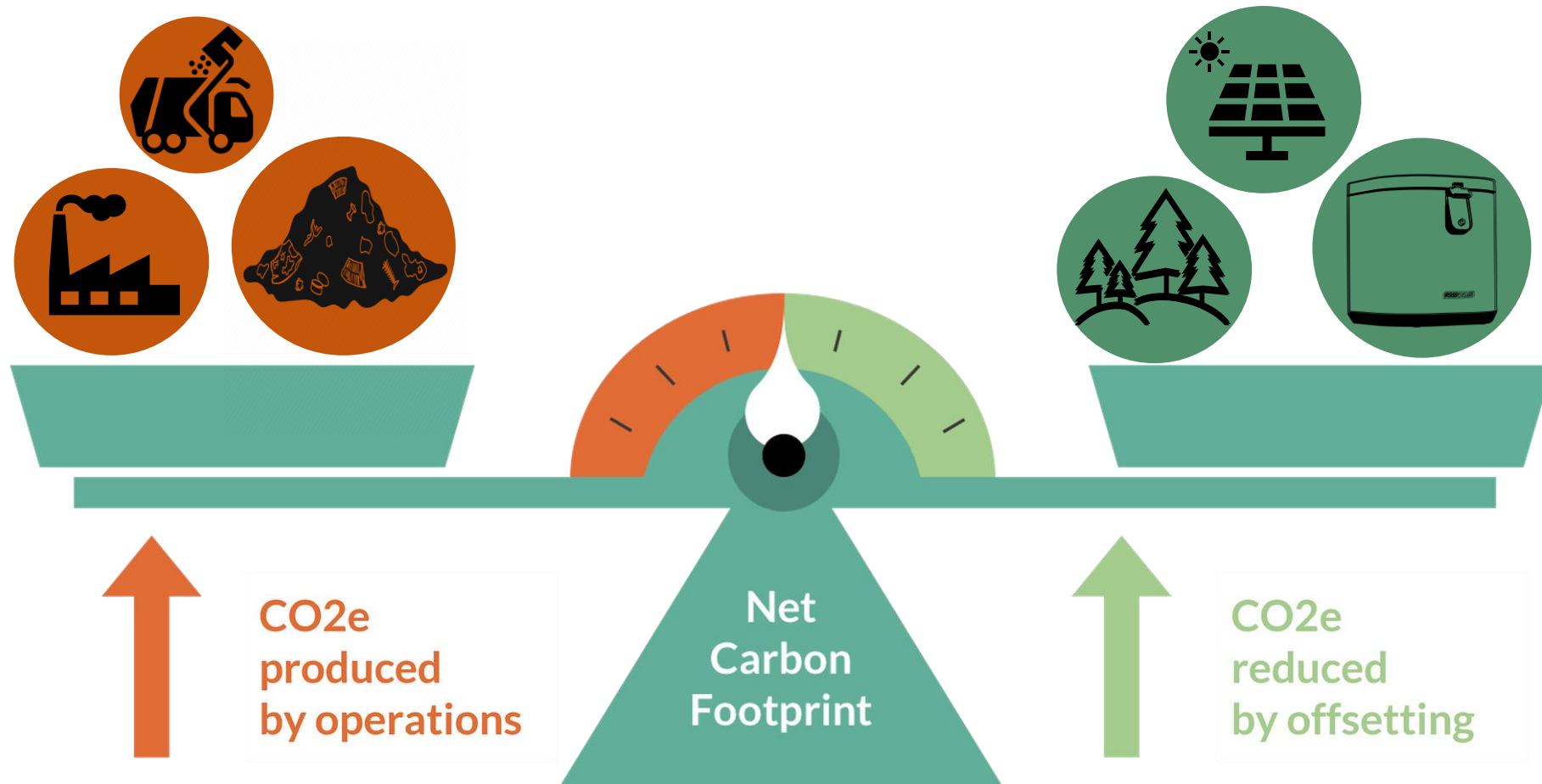
The FoodCycler by-product is a dry, sterile, odourless and nutrient-rich biomass with many beneficial uses and practical applications:

- 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

H o u s e h o l d s

40

M u n i c i p a l i t i e s



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

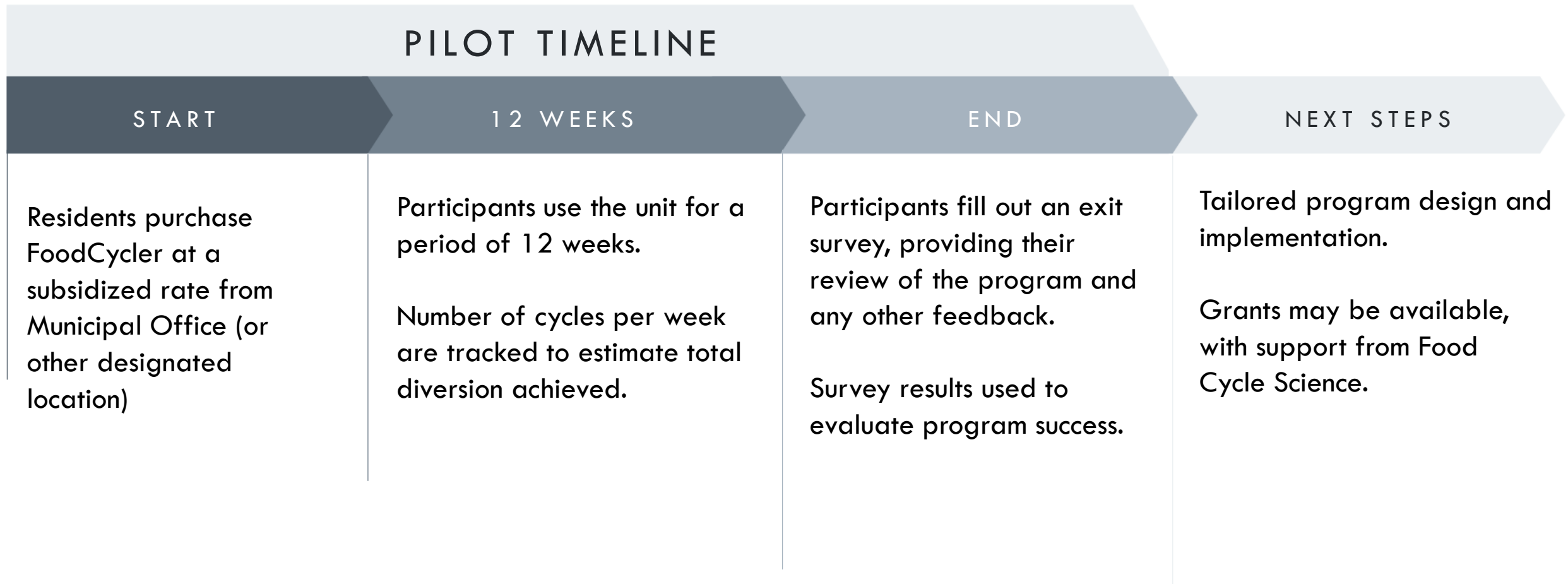
- ✓ Semi-Finalists in Stage 1 received **\$100,000**
- ✓ Finalists in Stage 2 received **\$400,000**
- Finalists will compete in Stage 3 to win one of two Grand Prizes of up to **\$1,500,000**

IN PARTNERSHIP WITH:



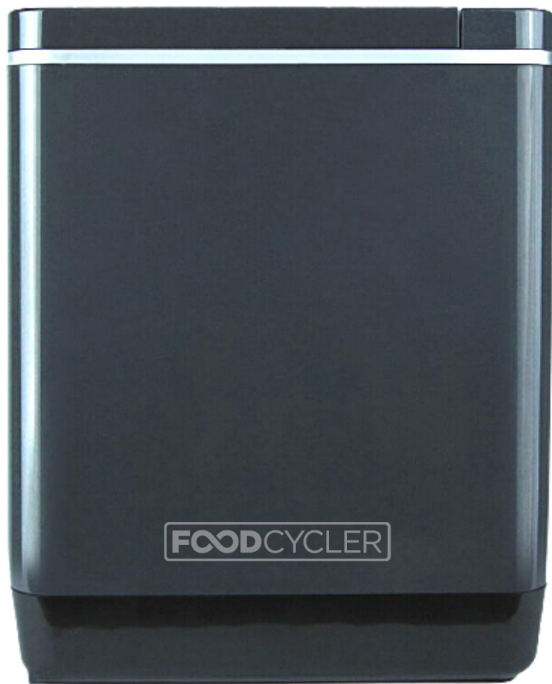
PILOT PROGRAM

12 Weeks from Start to Finish



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**

Next Steps:

- 🌱 Receive presentation as information.
- 🌱 If interested in partnering, refer to Staff for a recommendation to Council.





THANK YOU!
ANY QUESTIONS?

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