



# FOODCYCLER<sup>TM</sup> MUNICIPAL SOLUTIONS

The Future of Food Waste.



# WHO IS 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's *Food Waste Reduction Challenge*
- Selected as one of the 2021 Deloitte Fast 50 CleanTech award winners
- # 81 on Globe & Mail's Canada's Top Growing Companies for 2021



# TRUSTED CANADIAN SOLUTION

## FROM COAST TO COAST TO COAST



Forty-Two Canadian municipal partners  
... and counting!

# FOOD WASTE CHALLENGE

## IMPACT CANADA FINALIST

### 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:





# 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 MANAGEMENT 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 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



Fish & Poultry  
Bones



Egg shells

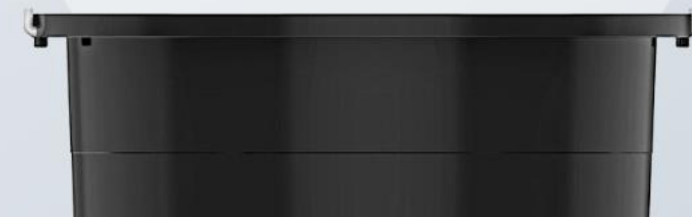


Nut shells, nuts  
& seeds



Meat, poultry  
& fish

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





# 90% FOOD WASTE REDUCTION

1 KG (2.5L) of wet,  
smelly food waste



4-8 HOURS + 0.8 kWh  
<10 cents / cycle

100 G of dry, sterile &  
odorless soil amendment



# IMPACT

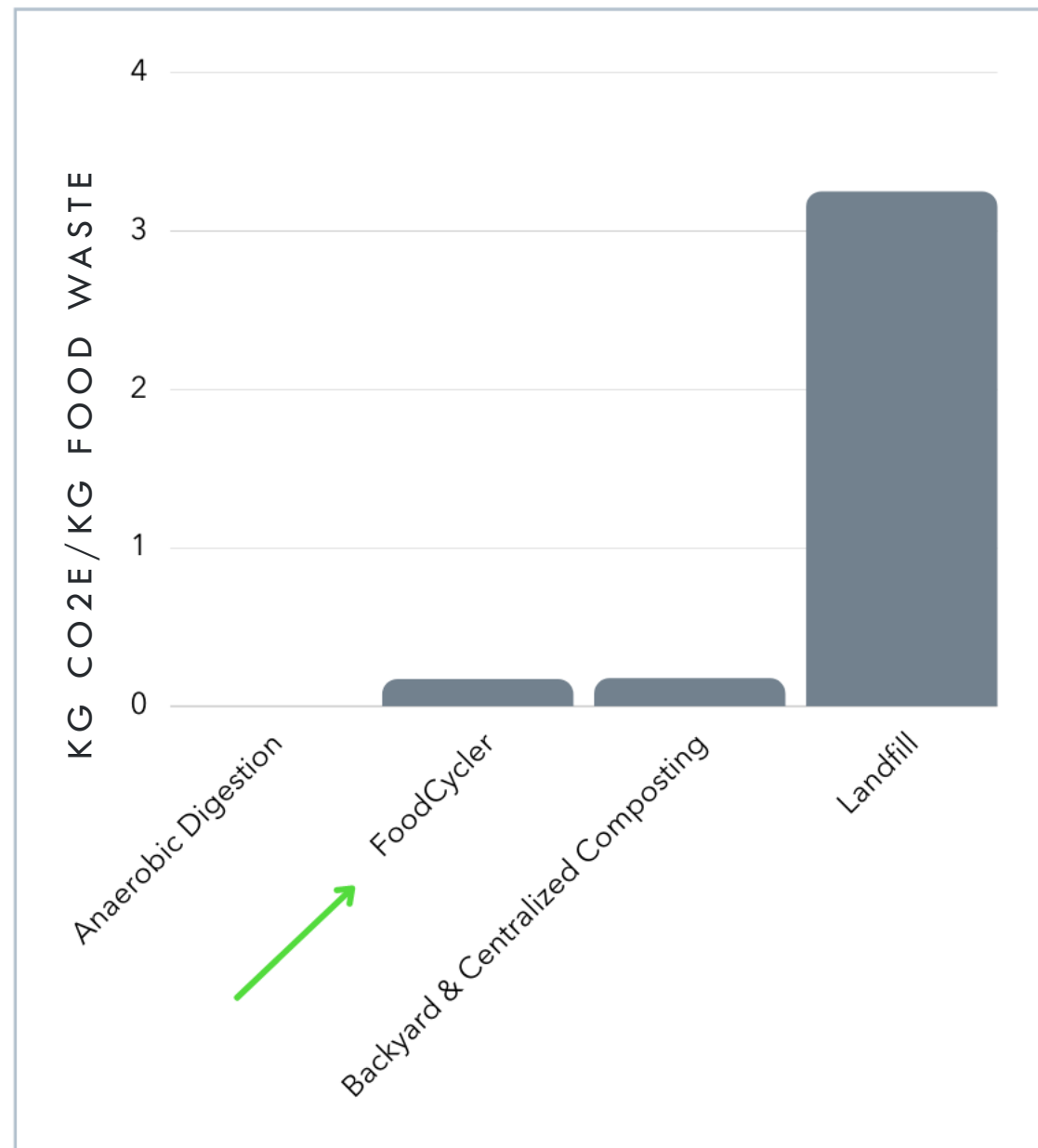
## ENVIRONMENT

### FOODCYCLER IS COMPARABLE TO:

- Central composting (with no transportation emissions)
- Backyard composting (if done correctly)
- **FoodCycler offers >95% reduction in CO<sub>2</sub>E vs. sending food waste to landfill**

Source: Based on carbon intensity of power grid = 0.08 kg/kWh in Ontario

\*\*Incorrect backyard composting can lead to methane gases and odours



# 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

## REGULATORY + SOCIAL PRESSURE

### 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 and everything like that."*

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



# THE FOODCYCLER PILOTS



**>3000 Households**

30 Municipalities have completed their pilot projects with overwhelmingly positive results.

## Net New Diversion

Each participating household is estimated to divert between 300-400 kg of food waste annually.



“WOULD YOU RECOMMEND FOODCYCLER?”

**>96% Yes**

**<1% No.**

The rest are undecided or need more time.

**★★★★★ 4.6**

Average overall user experience rating.

# 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.

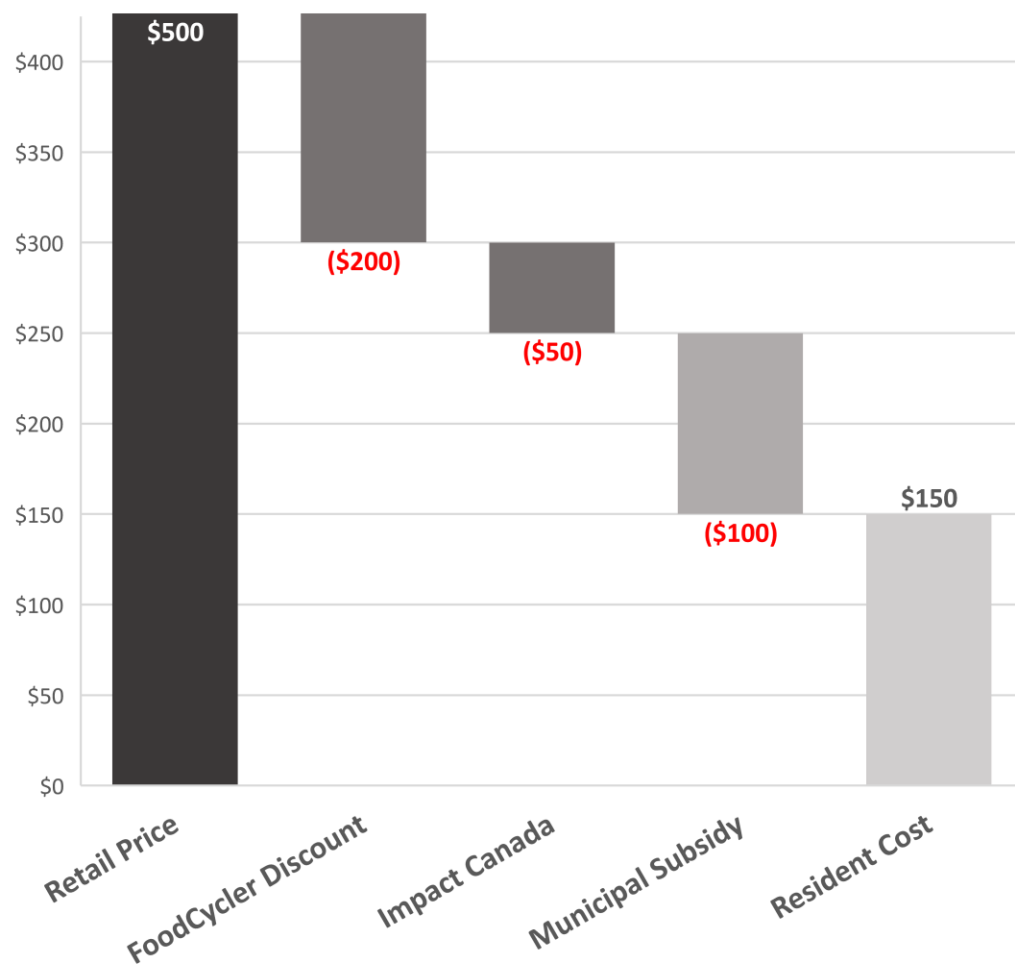
### NEXT STEPS

Full program design and implementation.

Many grants available, with support from Food Cycle Science.

# SUBSIDIZED PILOT PROGRAM

## FUNDED PILOTS AVAILABLE FOR Q4 2022 LAUNCH



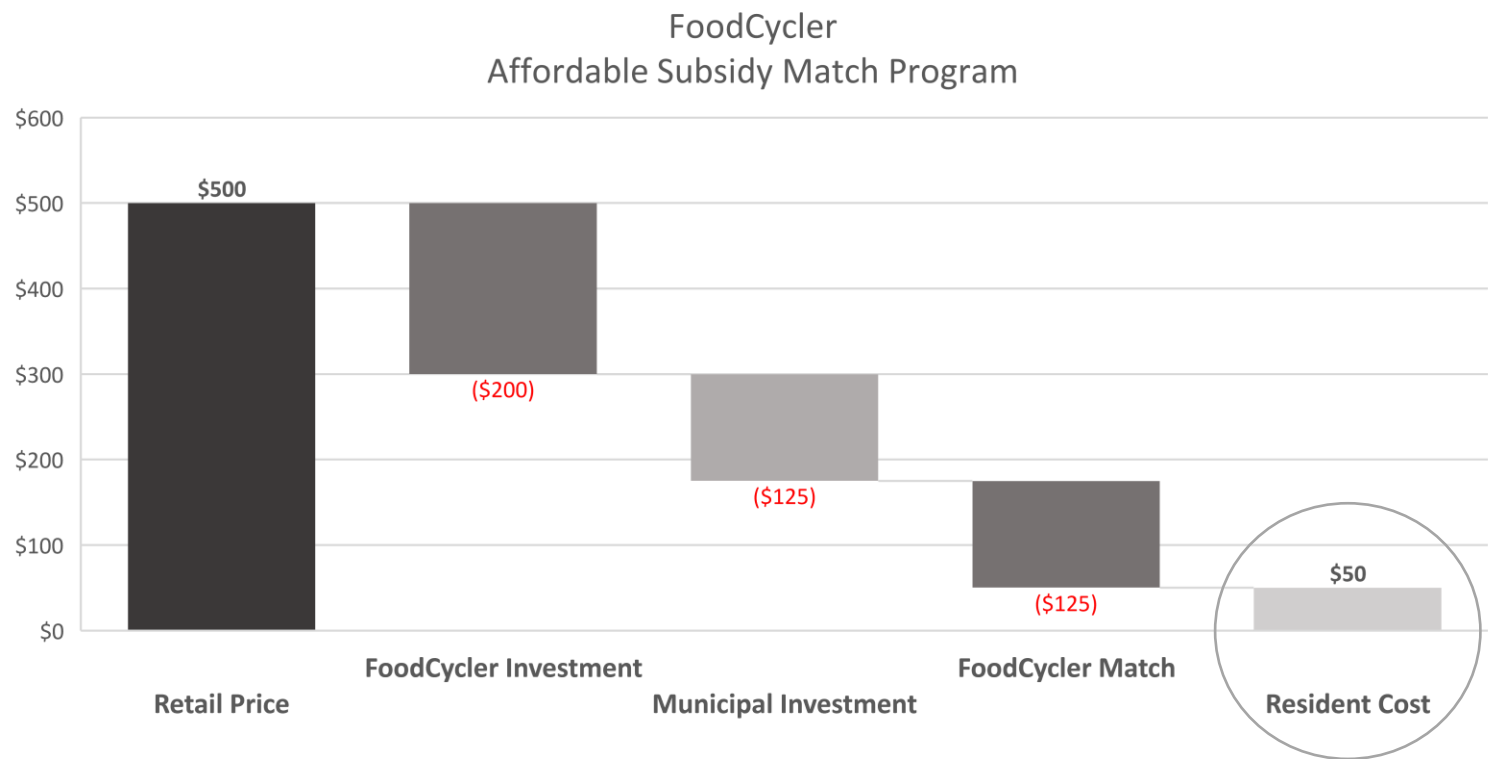
Municipality Population	Pilot Scope	Municipal Investment
<2500 residents	50 households	\$5,000
2500 – 10,000 residents	100 households	\$10,000
>10,000 residents	200 households	\$20,000

- Plus shipping costs and applicable taxes

# OPTIONAL AFFORDABLE ADD-ON

## GET 10% MORE UNITS

FoodCycler believes that food waste diversion solutions should be available to all Canadians, no matter where you live or whether you can afford it. By adding 10% more units to your order, FoodCycler will match the municipal investment on those units, lowering the cost to residents/community organizations to only \$50.00.





## Next Steps:

- 🍃 Receive presentation as information.
- 🍃 If interest, refer to Staff for a recommendation to Council.
- 🍃 Ask us about our Affordable Option for low-income residents and filter bundle option.





**THANK YOU!**  
**ANY QUESTIONS?**

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