

A large pile of colorful plastic waste, including bottles and containers, is shown under a cloudy sky. The text is overlaid on the image.

# **Artists in Waste Removal**

Product: Robotic Trash Cart (RTC)

# Artists in Waste Removal



Jacob Emerson, *CEO*

**Mechanical Engineer**



Oscar Flores, *CFO*

**Computer Engineer &  
Electrical Engineer**



John Williams, *CTO*

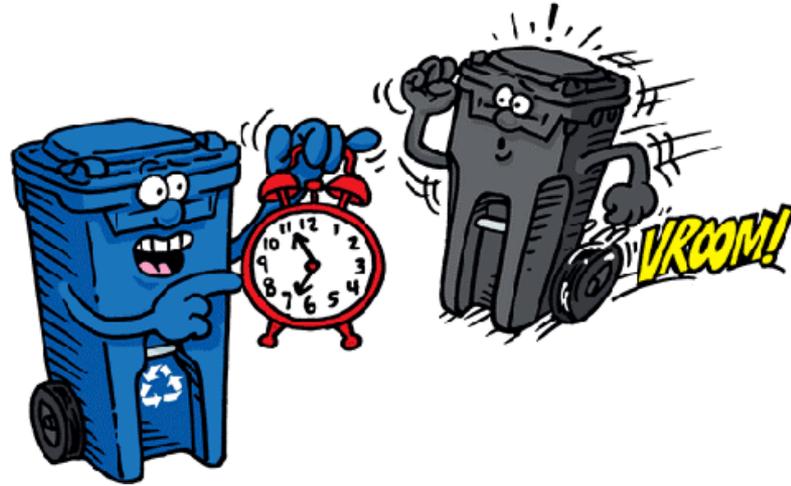
**Electrical Engineer**



Bishoy Morkos, *COO*

**Mechanical Engineer**

# The Problem



# Opportunity

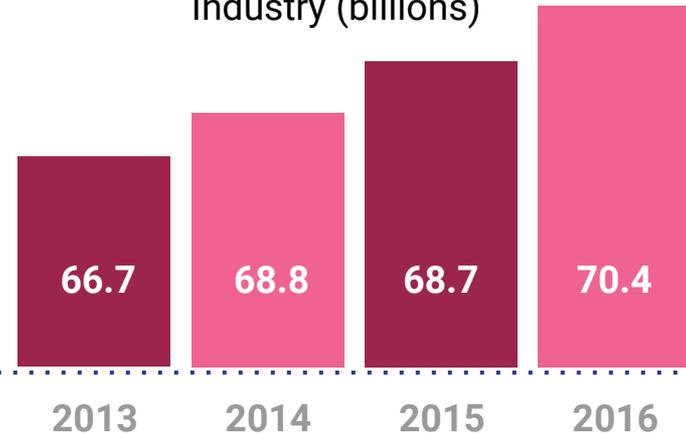
U.S. waste management industry revenue in 2016 was \$70.4 billion

26% of Americans over the age of 65 live alone

“Baby Boomers” generation will be doubling the senior population in the upcoming years



U.S. Revenue of the Waste Management Industry (billions)



# Customer Interviews

Consumer 1

Consumer 2

Consumer 3

“... My friend had such a long driveway that they paid their neighbor to come take out the trash for them.”

“[Waste bin is] so heavy sometimes I can't bend it towards me to pull it to the curb.”

“The distance of having a long driveway is my biggest problem I'd say.”

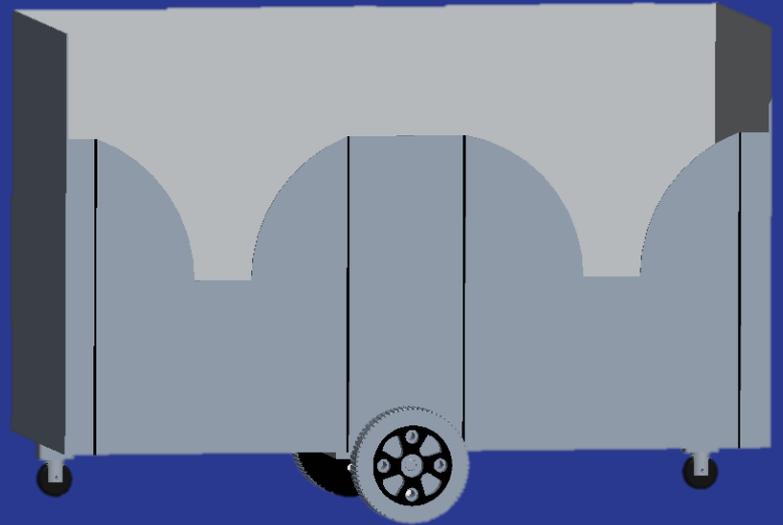




# The solution

Automating the waste  
removal process

## Robotic Trash Cart



# What is the RTC ?

The Drive System  
from a Kiddie Car



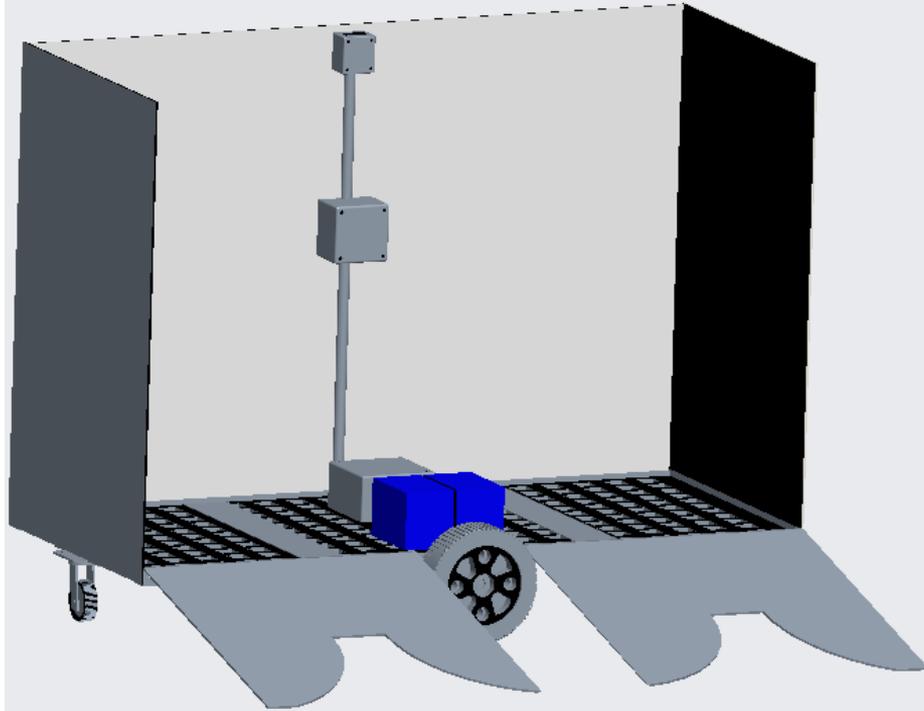
The Autonomous  
Actions of a Roomba



The Ruggedness  
of a Garden Cart



# Prototype



- Rechargeable
- Scheduling capabilities
- Open/Closed Garage Door
- Carries both garbage and recycling bins

# Prototype Build



# Markets

- Residential
  - Elderly living communities
  - Disabled residents
  - Homeowners
- Industrial
  - Waste Management Companies (WastePro)
  - Construction sites
  - Manufacturing facilities
  - Companies that have heavy amounts of waste or recyclables



# Manufacturing and Revenue

Manufacturing Cost per unit: \$300.00

Potential Revenue Streams:

- Licensing Contract
- Service Contracts
- Leasing Contracts



# Other AWR Opportunities



## Single unit waste bins

- Sense when they are full
- Self-navigate to a central waste site
- Streamline waste disposal for businesses

## Designed for locales with dense foot traffic, such as...

- Amusement Parks and Stadiums
- Universities and college campuses
- Local, state, and federal parks

An aerial photograph of New York City at dusk. The sky is a mix of dark purple, blue, and orange. The city lights are visible, with the Empire State Building prominently lit in green and red. The Hudson River is visible in the distance. The text "Thank You" is overlaid in the center in a white, sans-serif font.

Thank You