STT HanKook

Waste Management (Green Future)

PRODUCT INFO

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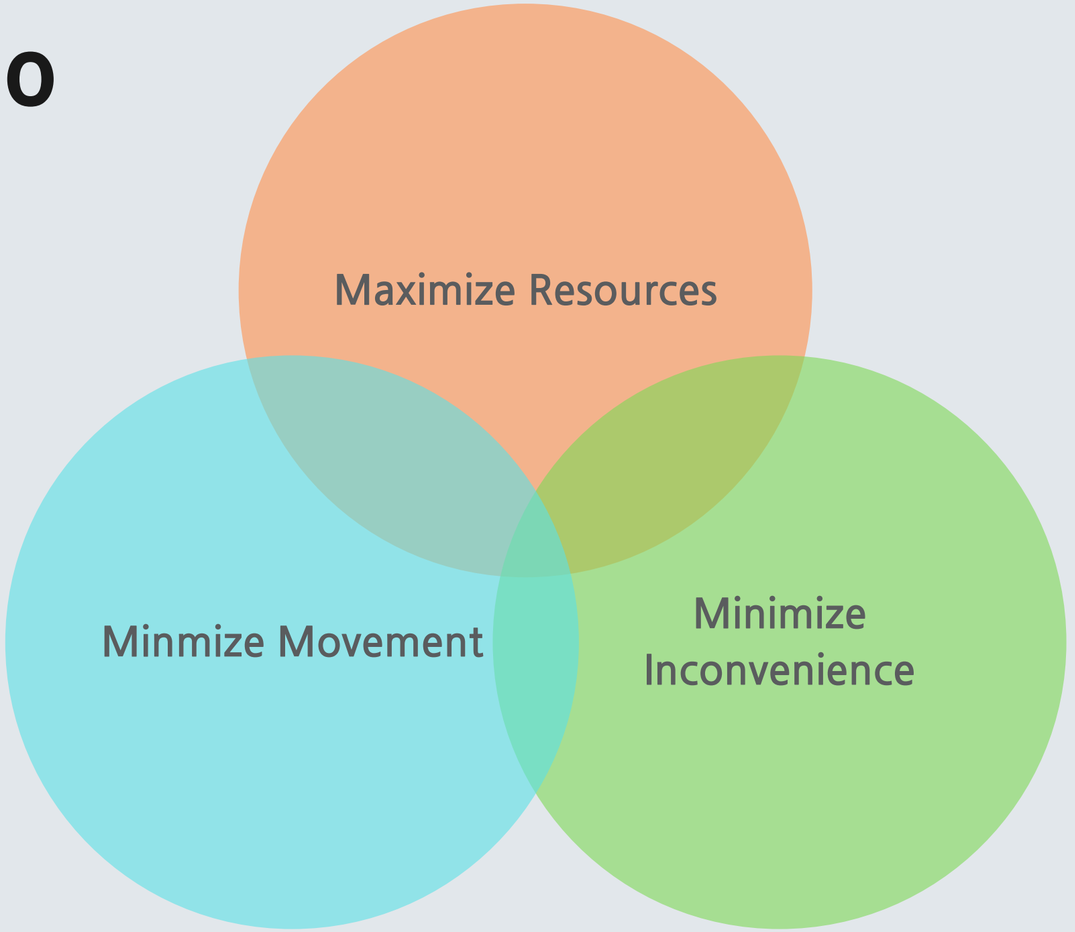
WHAT IS THE CURRENT PROBLEM WITH FOOD-WASTE MANAGEMENT

There is overwhelming food waste that is difficult to manage

Food waste is currently managed in a enviromentally-hazardous method

SOLUTION

To provide a recylcing process with less damage to the environment through plasma technology



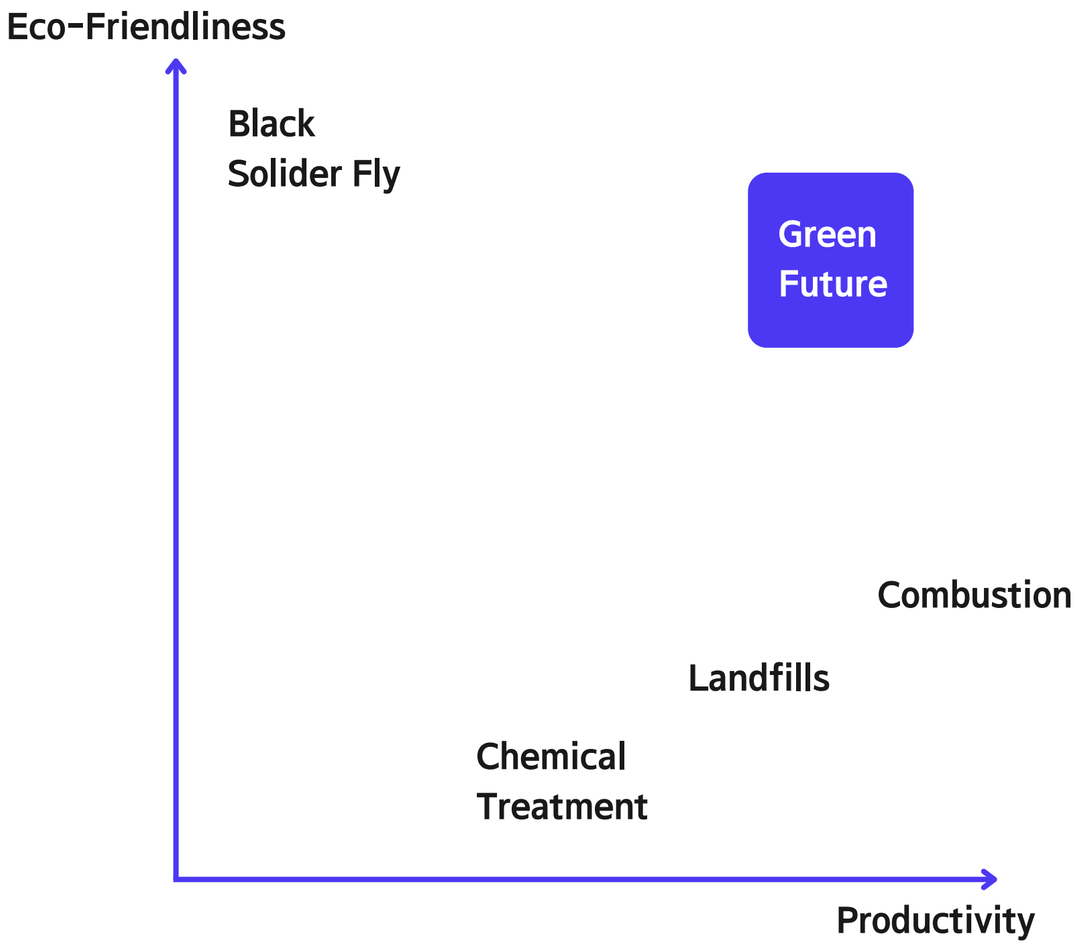
Competition & Market

Food Waste Management Market Size is predicted to Reach at USD 64,025 Million by 2030, Registering a CAGR of 5.7%

- Acumen Research and Consulting

- According to the UN Environment Programme, approximately 931 million tons of foods are wasted each year.
- Increasing government rules and regulations for greenhouse gas emissions are driving the food waste management industry
- According to the UNEP, around one-third of all food produced for human use around the globe each year - around 1.3 billion metric tons - is wasted or lost.
- Food wastage and trash cost around $680 billion in industrialized countries and 310 billion in poor countries.

Competition Analysis



Why us?

Customizable

Eco-Friendly

Advanced , Sustainable Technology

Hygienic

Industry Competitors Method of Waste Management	Eco-Friendly	Wide Application Possibility
Plasma	Yes	Yes
Black Solider Fly	Yes	No
Combustion	No	Yes
Landfills	No	Yes
Chemical Treatment	No	Yes

Our Product

Plasma Dryer

Plasma Pyrolysis to create Plasma-dried Carbide

Dryer

Moisture Evaporation

- Dryer for Mass Disposal Site
- Dryer for Residential Complex (RFID)

Target

Food waste, fish bone, shells, onion skin and etc
(Heat treatment application objects)

Use Case

Theme park, Botanic garden, Compost for pot, city street trees, smart cities, farms

Recommended as a Dryer + Plasma-Dryer Total Solution

ex) 1~5 Dryer + 1 Plasma-Dryer

Benefits

- Carbon neutrality (Carbon capture from dry carbonization by-products)
- Improve sanitation by eliminating need for food collection vechicle
- Complete treatment at origin site
- Self-processing ability

Recycling Process

Input Food Waste (Biomass)

Dryer Operation

Moisture Evaporation by Indirect Heating

Reduce 90% ~ 99%

Automatic Emission
(Condensate Drain)

Recycling

Plasma Dryer

Specifications

Consist of:

- Plasma generator, N2 Generator, Cooling Water Tank, Dust and gas treatment equipment, etc
- Fault diagnosis for jam and overheating
- Auto-discharge mechanism after treatment and cooling
- Low CO2 generation with pyrolysis facility

Method
Plasma dry carbonization method

Avg. Power Consumption
16kw/h (3-phase 4-wire system 380V / 60Hz)

Capacity (min)
99kg / day

Reducing Rate
90 ~ 99 % (Depends on Objects)

Weight
Equipment : 1,280 kg
By-product Case : 130 kg

Size
Equipment : 1,440mm x 2,010mm x 1,690mm
By-product Case : 600mm x 600mm x 2,000mm

Dryer Operation

Specifications

Dryer for Mass Diposal Site (1)

- Manual operation (2)

Dryer for Residential Complex (RFID)

- Automatic process from door opening

Method
Dry Composition

Capacity (min)
99kg / day

Weight

- 400 kg - (1)
- 500 kg - (2)

Size

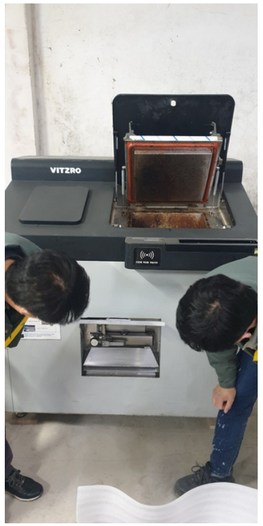
- 1,100mm (W) 1,100mm (D) 1,300mm (H) - (1)
- 1,300mm (W) 1,100mm (D) 1,300mm (H) - (2)

Avg. Power Consumption
6kw/h (3-phase 4-wire system 380V / 60Hz)

Reducing Rate
90 ~ 99 % (Depends on Objects)

How does it work?

Input Food Waste (Biomass) → Dryer Operation → Moisture Evaporation by Indirect Heating → Automatic Emission (Condensate Drain) → Recycling



ALLOWING WASTE REDUCTION BY 90 ~ 99%

Thank you