

# Food Waste Management SEOUL

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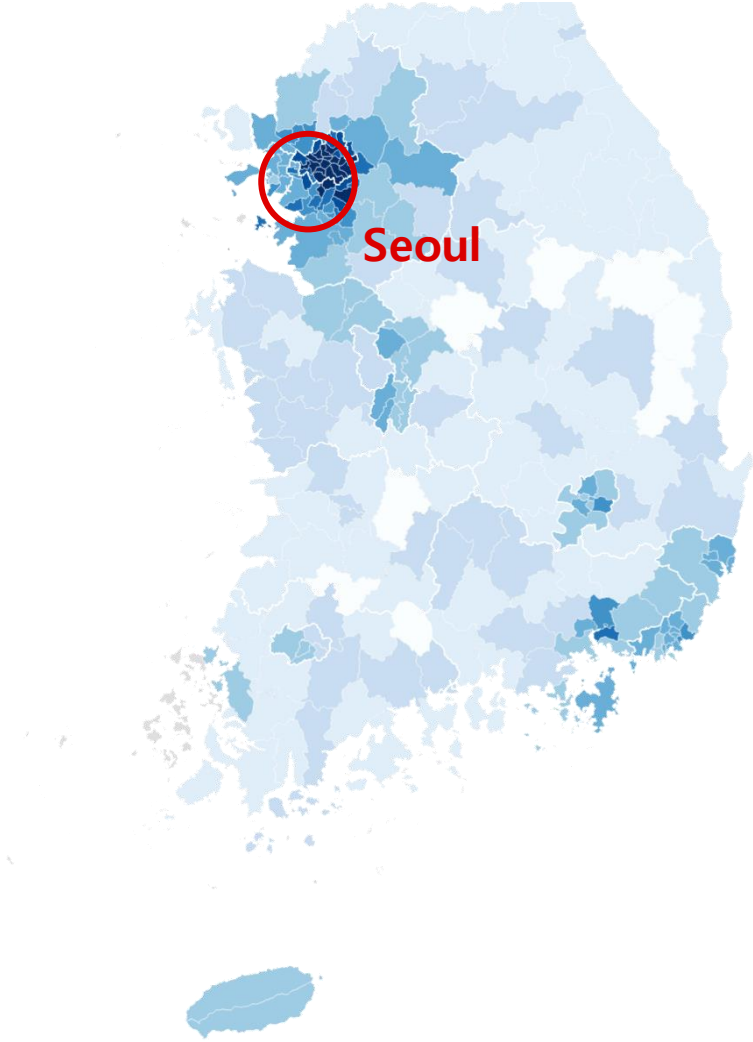
# I

## General Information on Seoul

1. Map of KOREA
2. Area & Population
3. 25 District Offices



# 1. Map of KOREA

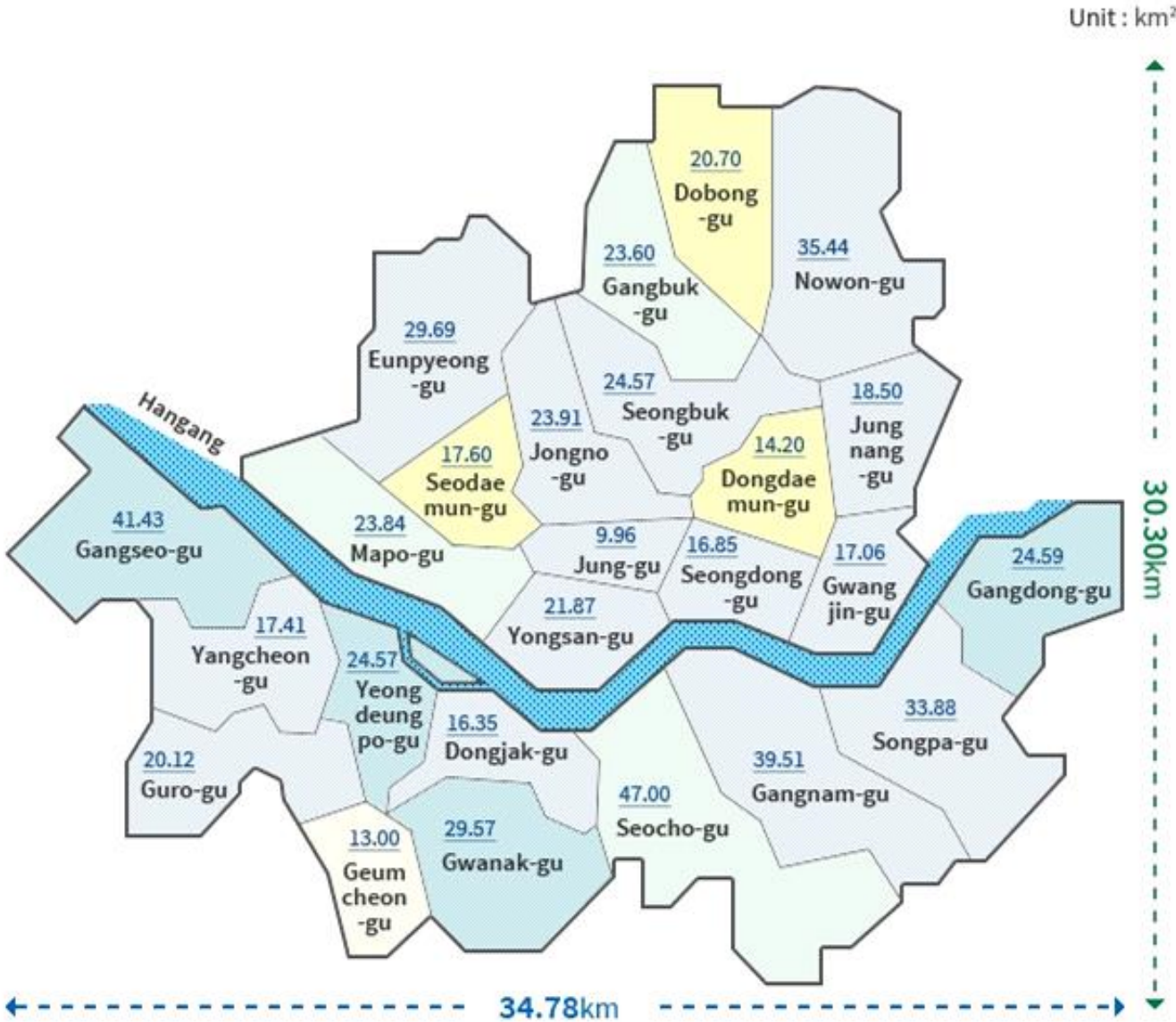


# 2. Area & Population



- ◇ Area : 605 km<sup>2</sup>
- ◇ Population : 10.44 million persons

# 3. 25 District Offices





## II

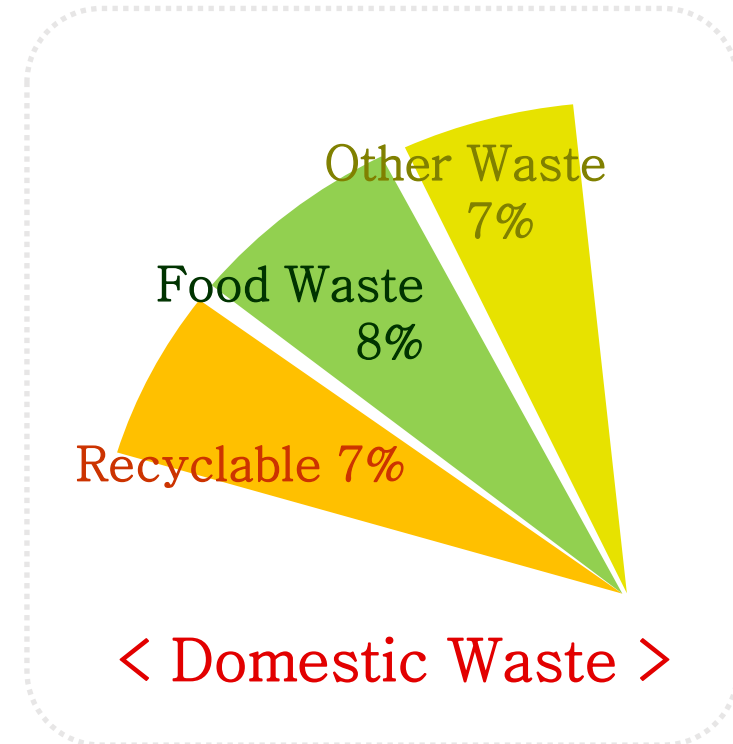
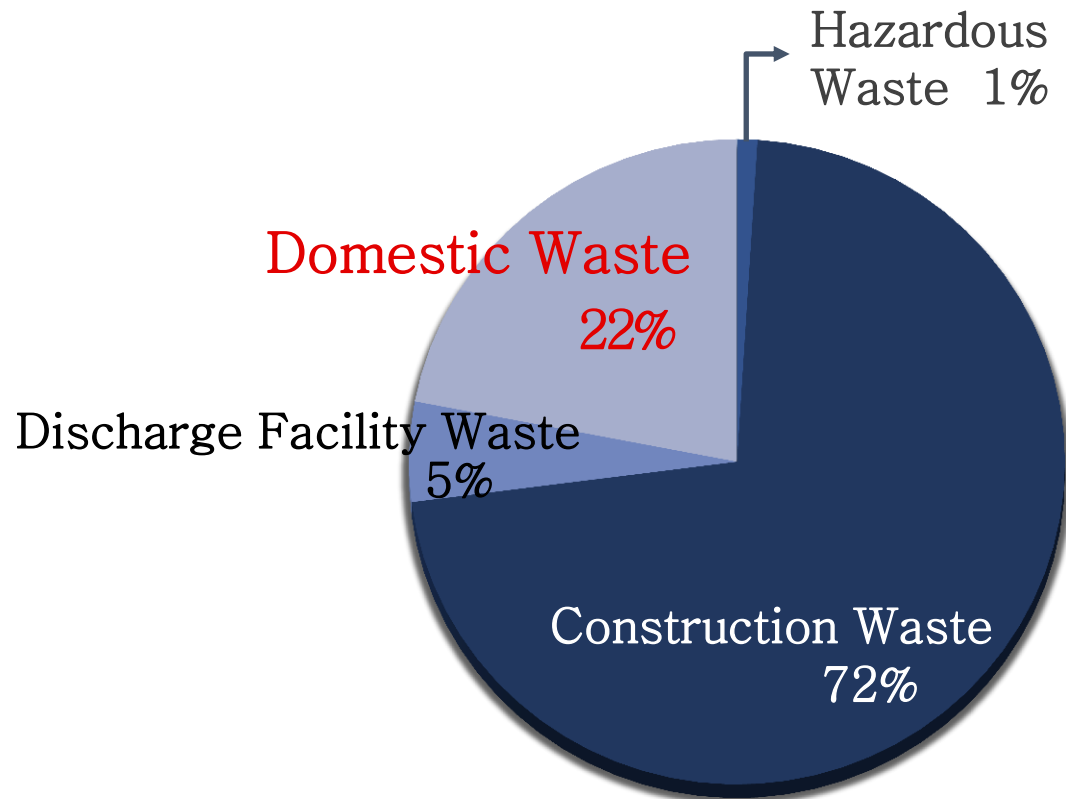
# Overview of Waste Management

1. Composition of Waste
2. Waste Management History



# 1. Composition of Waste

42,000 tons per day





## 2. Waste Management History

- **1978 ~ 1993** Nanjido Landfill Sites
- **1993 ~ Present** Sudogwon Landfill Sites
- **1995** Pay-as-you-throw Scheme
- **1996** Incinerators 

Yangcheon(1996), Nowon(1997), Gangnam(2001)  
Mapo(2005), Eunpyeong(2009)
- **2005** Ban on food waste landfill
- **2013** Ban on FWL discharge to the sea



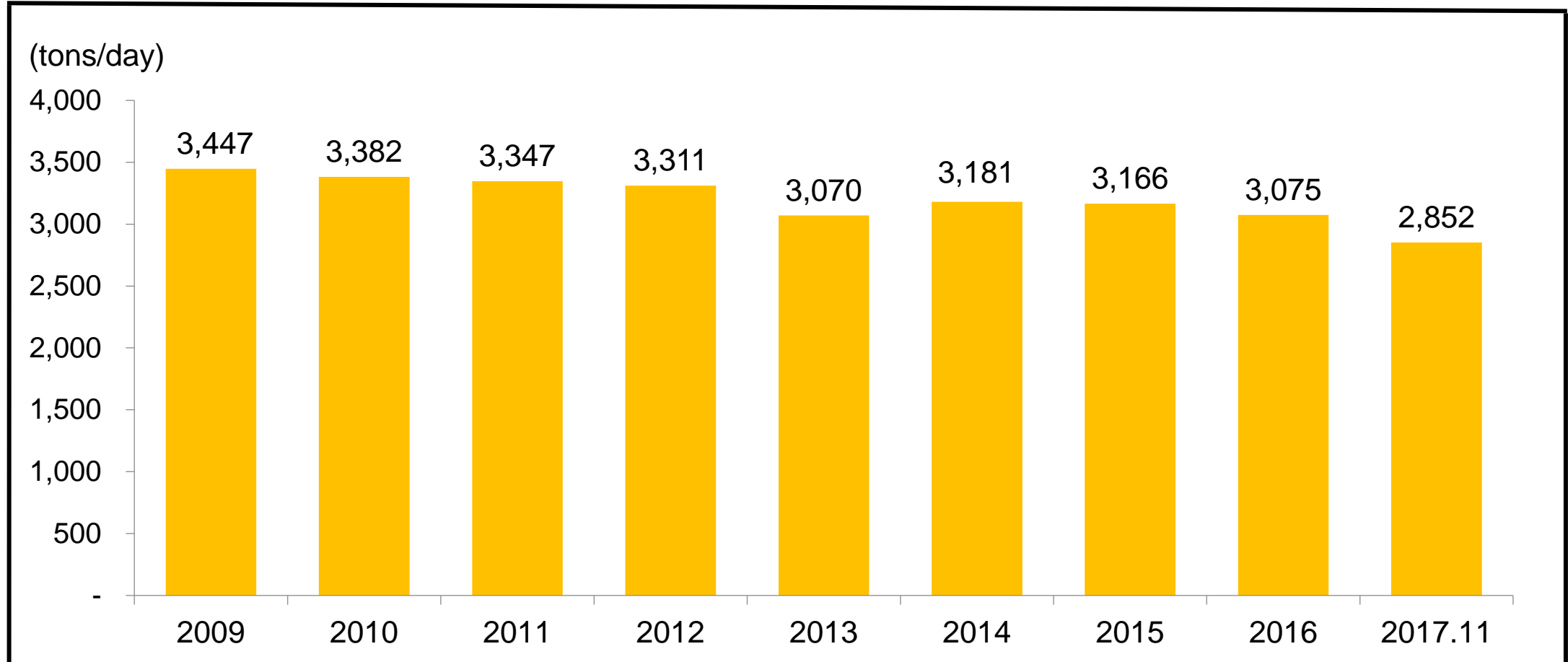
### III

## Food Waste Policies

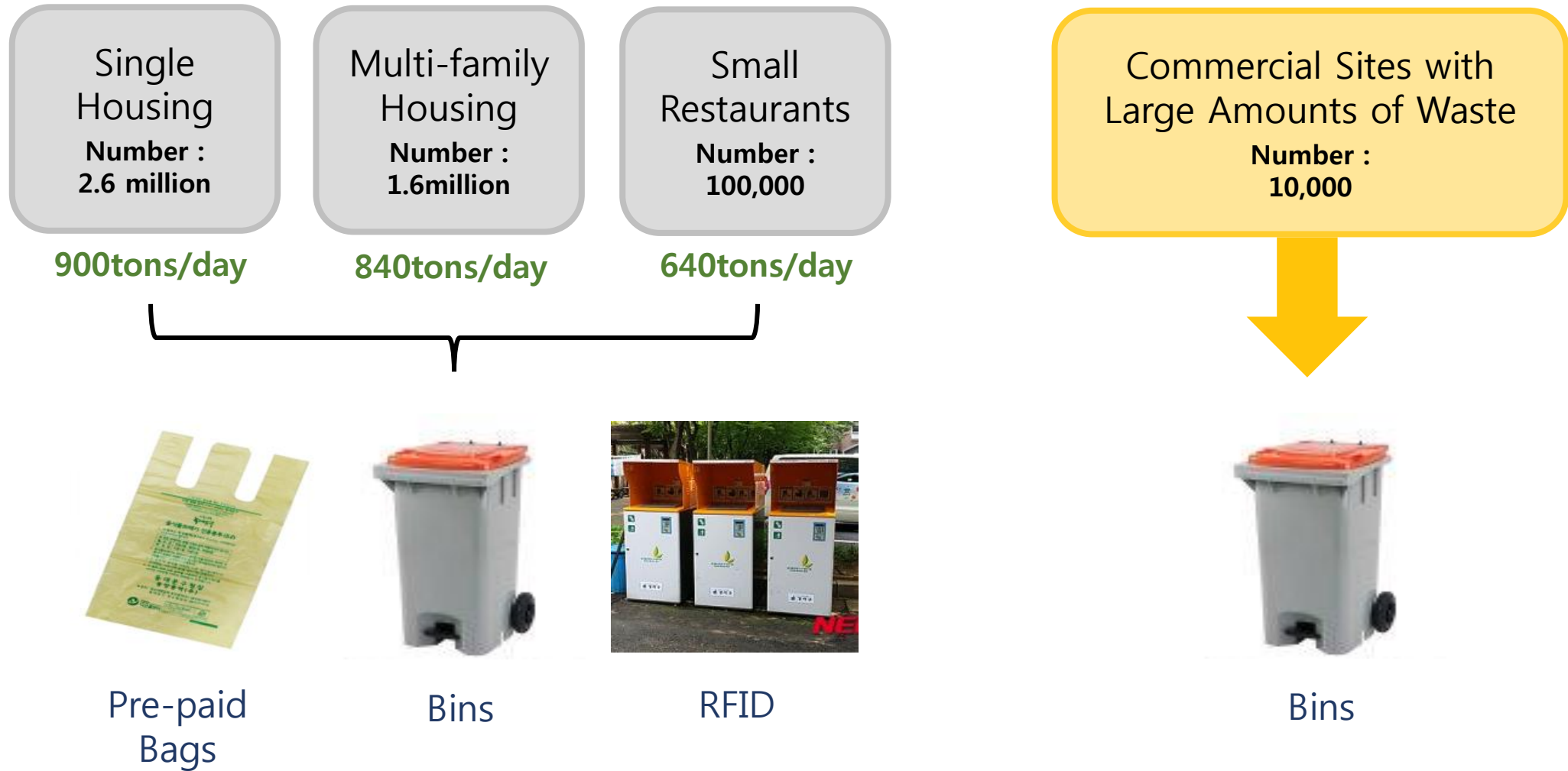
1. Food Waste Generation
2. Food Waste Collection
3. Food Waste Disposal



# 1. Food Waste Generation



## 2. Food Waste Collection



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## 3. Food Waste Disposal

**1) Food Waste**

**2) Food Waste Leachate (Public treatment plants)**

## 1) Food Waste

- Five public food waste treatment plants in Seoul are responsible for 38% of the total food waste disposal.

Category	Total	Dongdaemun	Songpa	Gangdong	Dobong	Seodaemun
Capacity (tons/day)	1,160	110	280	360	110	300
Solids		Biogas	Animal Feed			Compost
FWL			Biogas	Biogas (Sewage Treatment Plants)		

※ gas : to remove odor, dry solids and heat digesters

- 35 private plants located outside Seoul are responsible for 62% of the total food waste disposal. (Compost and animal feed)

## 2) Food Waste Leachate(Public treatment plants)

Category	Total	Inside Seoul				Outside Seoul	
		Sewage Treatment Plants			Songpa	Sudogwon Landfill	
		Jungnang	Nanji	Seonam		Leachate	FWL
Capacity (tons/day)	1,450	270	230	170	240	340	200
FWL		Biogas					

※ gas : to generate power, remove odor and heat digesters

※ Seonam : 300 tons/day (2016 ~ 2022)

Gangdong : 270 tons/day (2013 ~ 2022)



## IV

# Other Food Waste Disposal

1. Disposer (Shredder installed under a kitchen sink)
2. Stand-alone Disposer
3. Large-scale Food Waste Reducer
4. Raw Food Waste Composting
5. *Ptecticus tenebrifers*
6. Earthworms





# 1. Disposer (Shredder installed under a kitchen sink)

1) Discharge into sewer

2) Solid Waste Collection / FWL discharge into sewer

3) Microorganism Fermentation to discharge into sewer

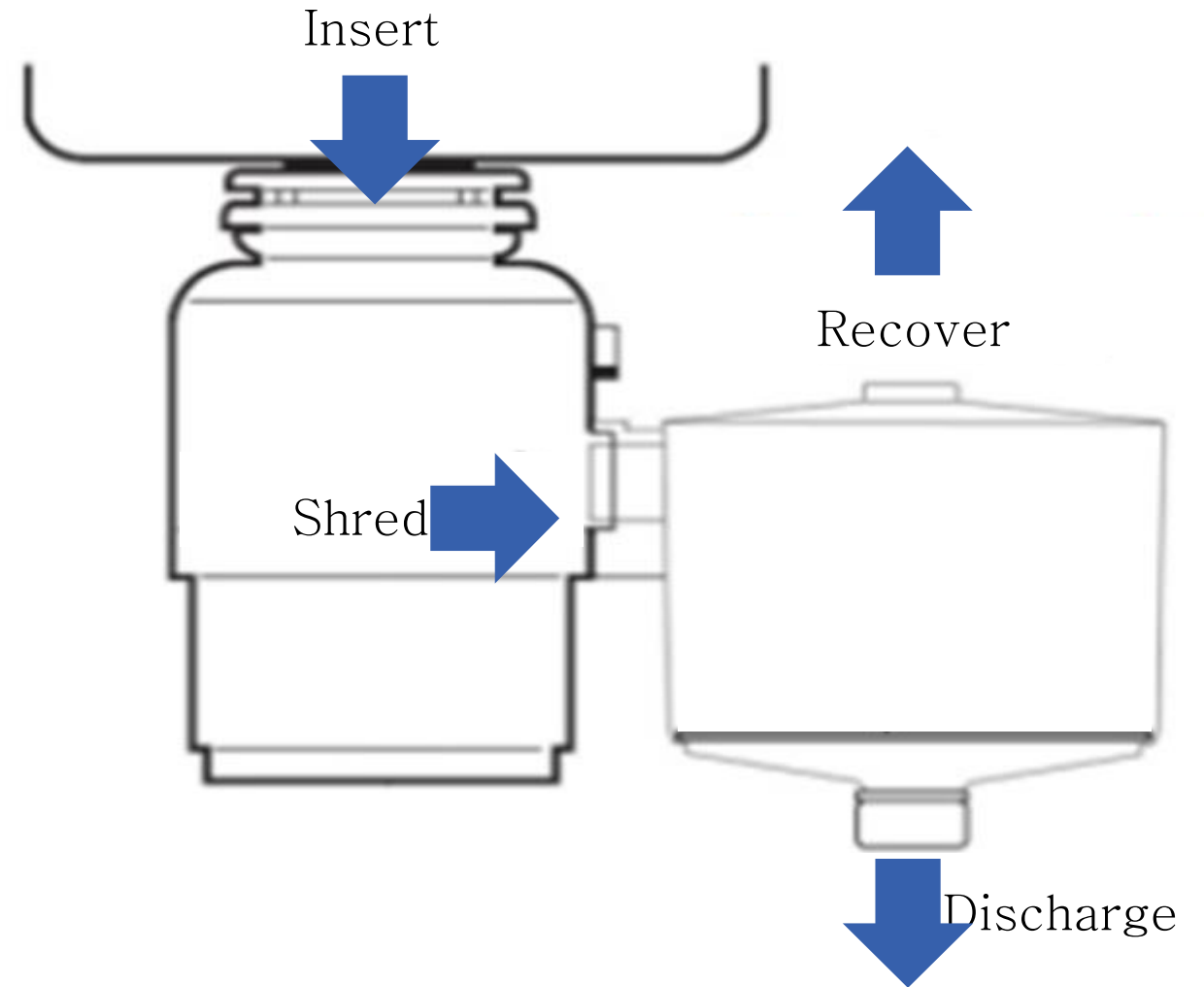
◆ Discharge into septic tank (Pilot scheme)

◆ Multi-family Solid Collection / FWL discharge into sewer  
(Pilot scheme)

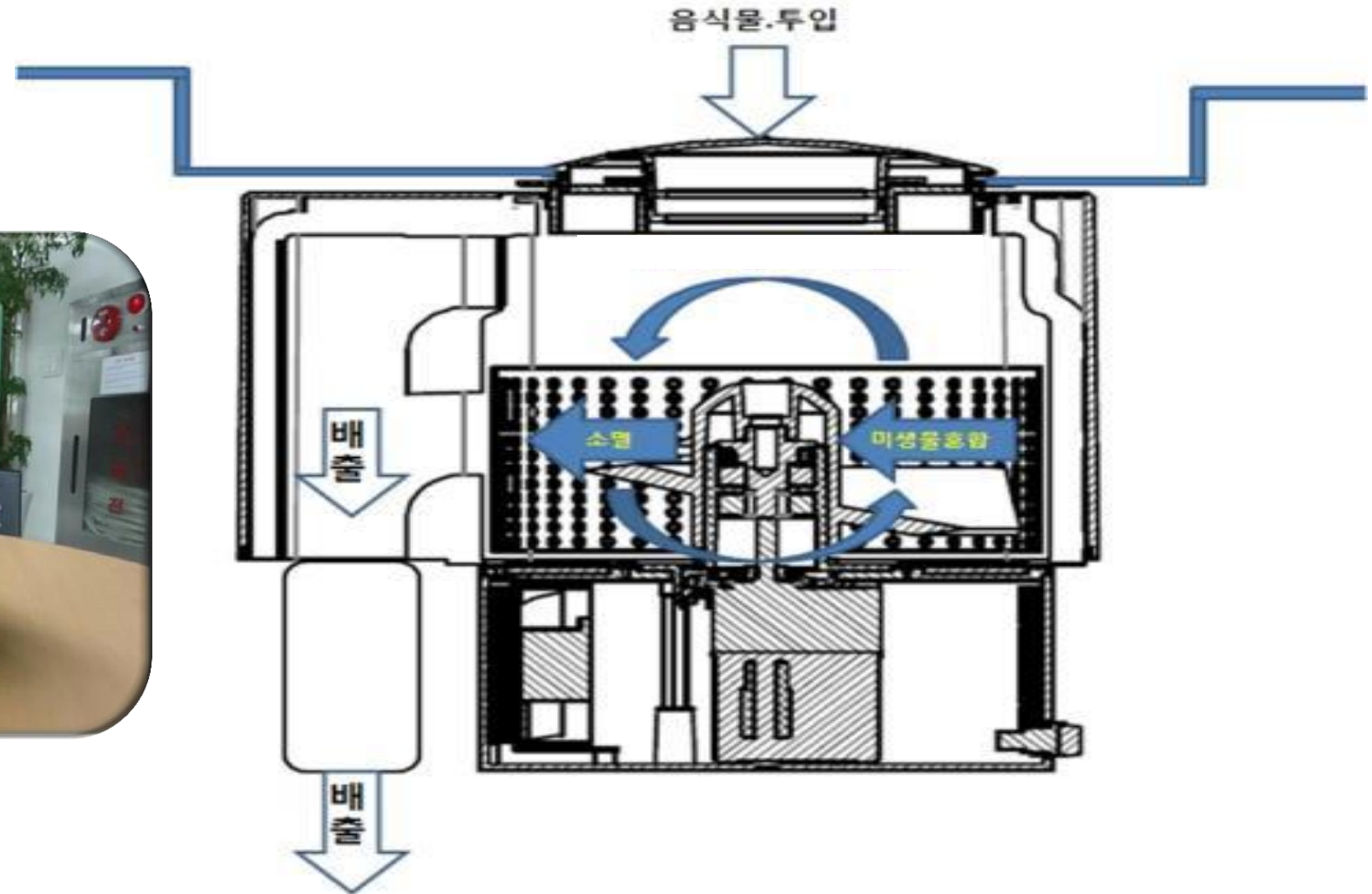
# 1) Discharge into sewer



## 2) Solid Waste Collection / FWL discharge into sewer



### 3) Microorganism Fermentation to discharge into sewer



## ◆ Discharge into septic tank (Pilot scheme)



# ◆ Multi-family Solid Collection / FWL discharge into sewer (Pilot scheme)

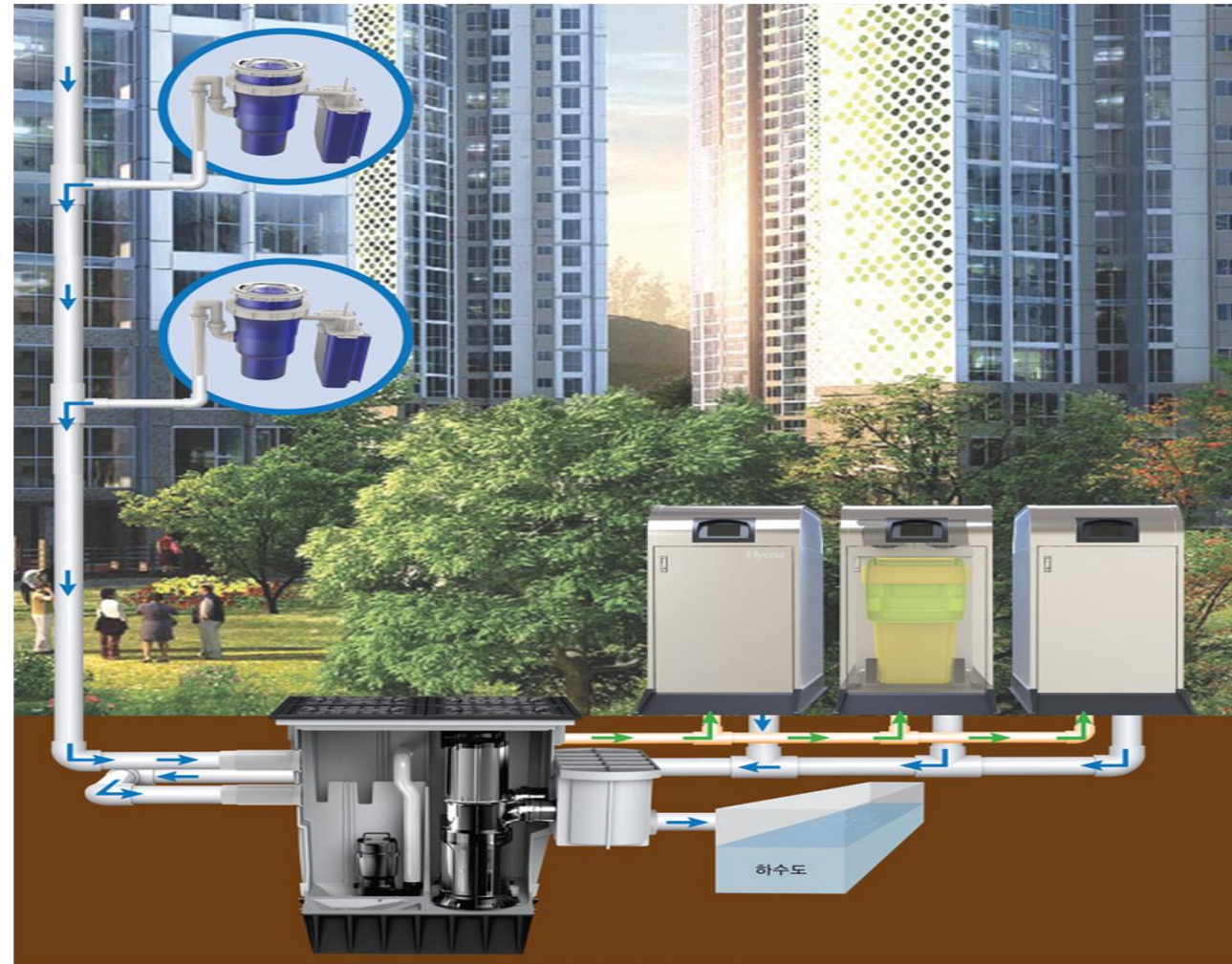
Cutter/  
transporter



Solid-liquid  
separator



Resource  
recovery  
machine

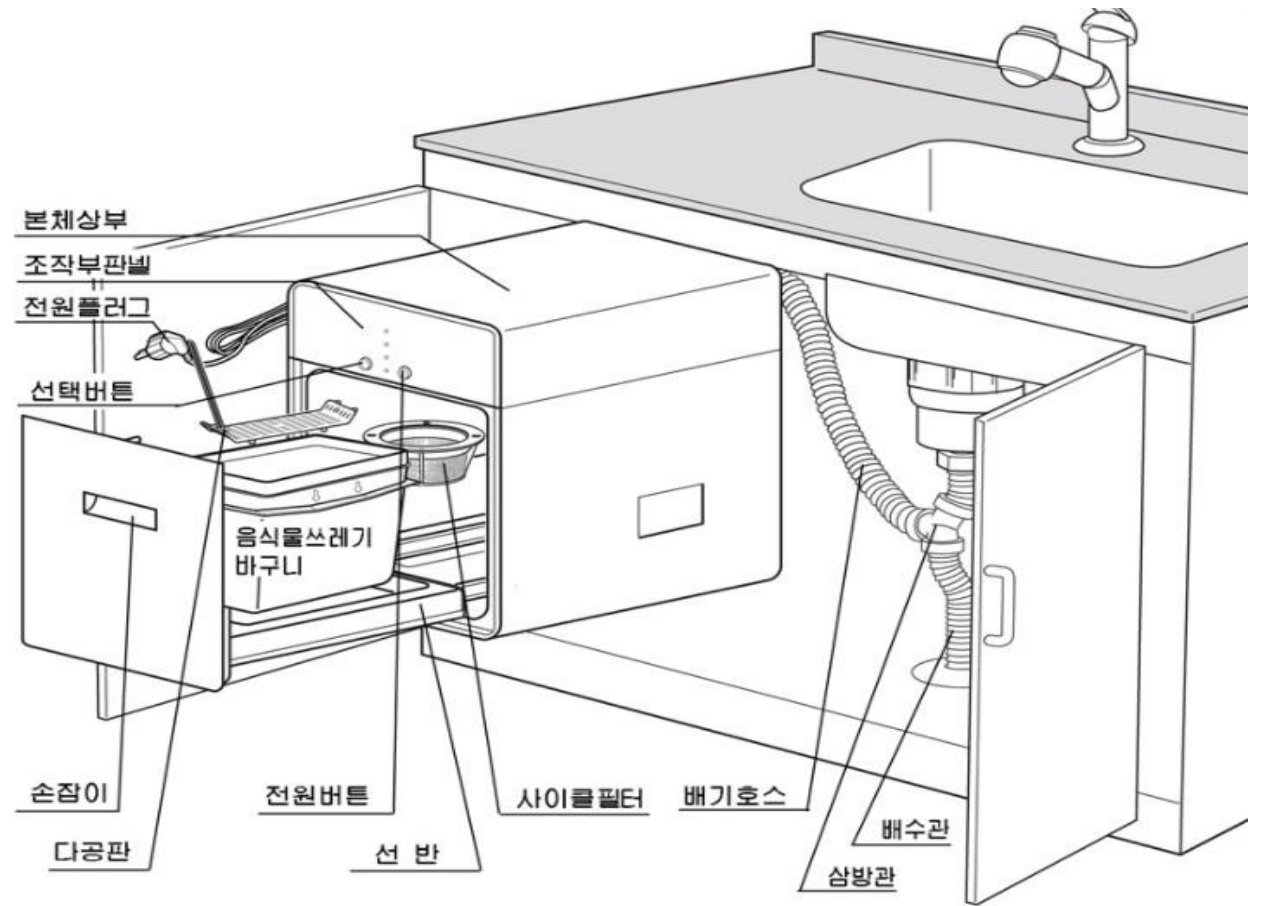


## 2. Stand-alone Disposer

- 1) Dryer
- 2) Shredder & Dryer
- 3) Microorganism Fermentor



# 1) Dryer

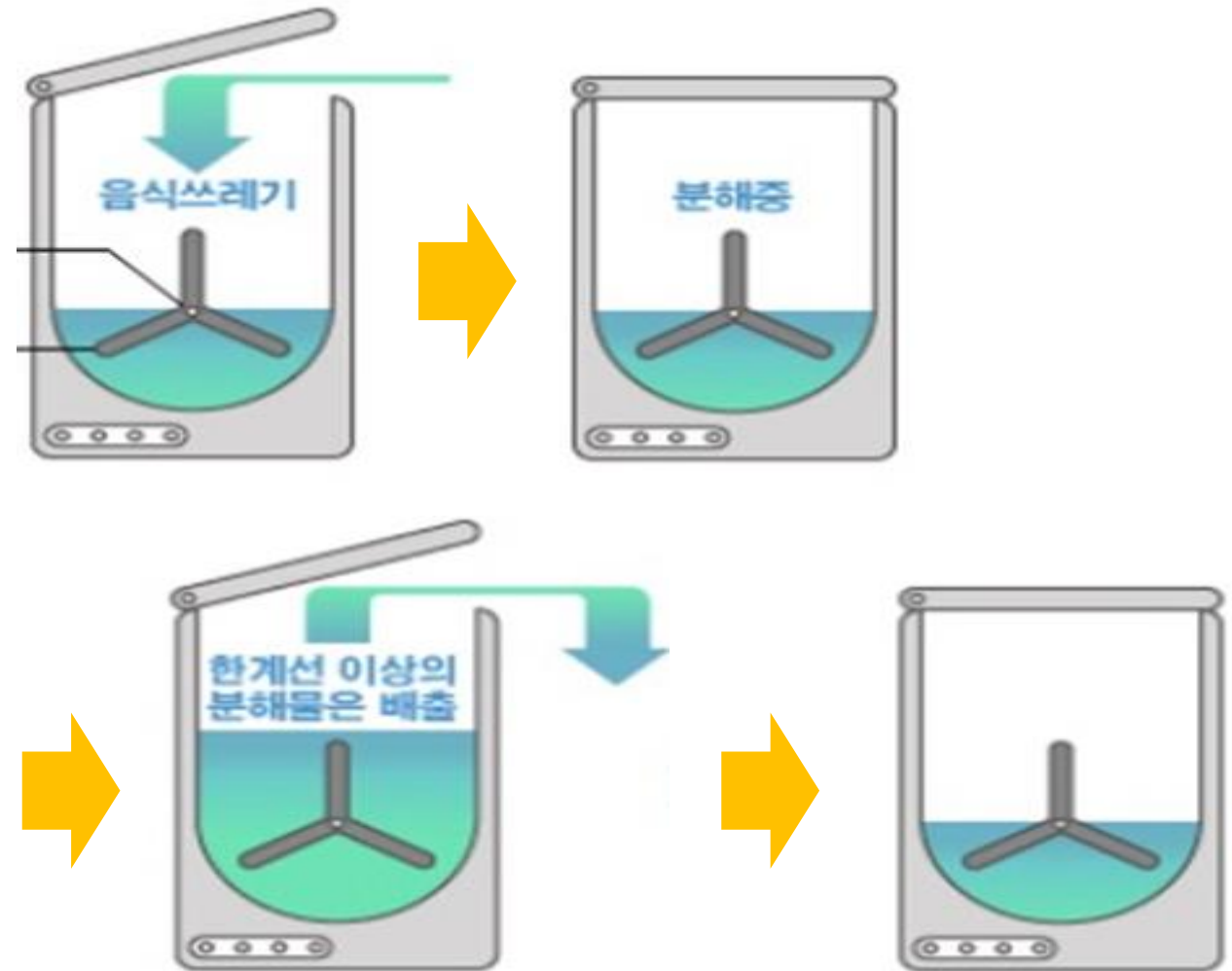




## 2) Shredder & Dryer



### 3) Microorganism Fermentor

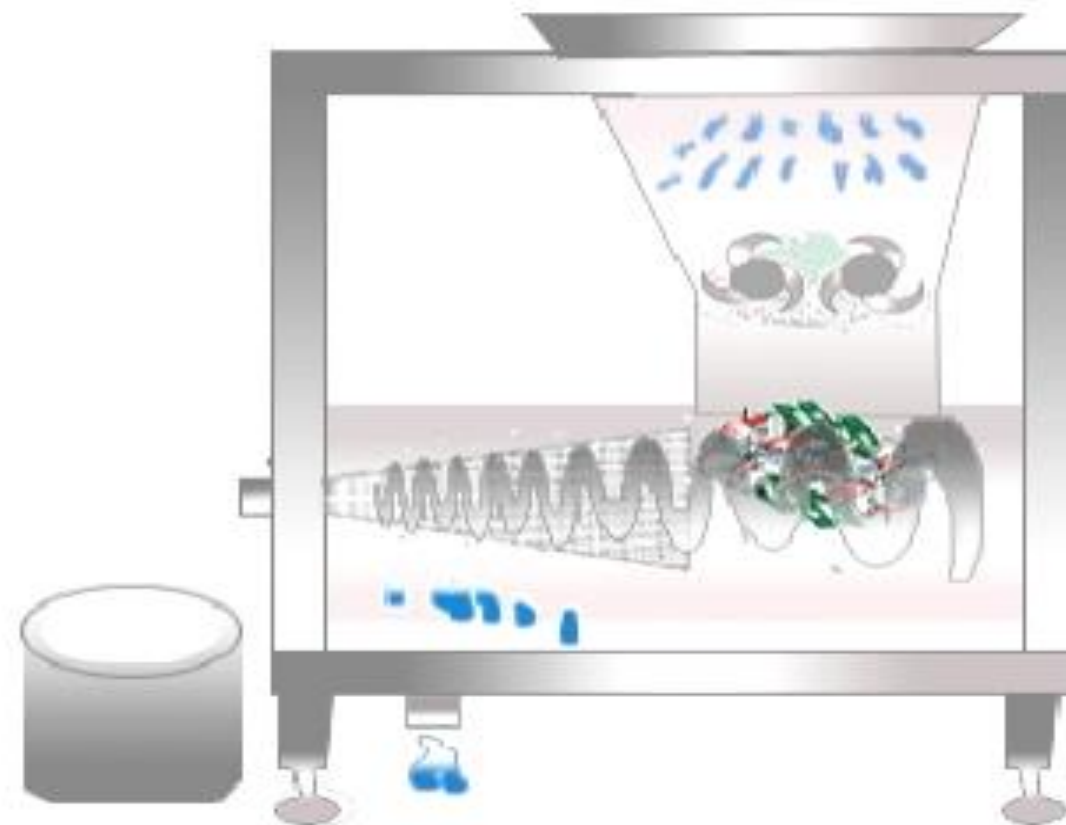


### 3. Large-scale Food Waste Reducer

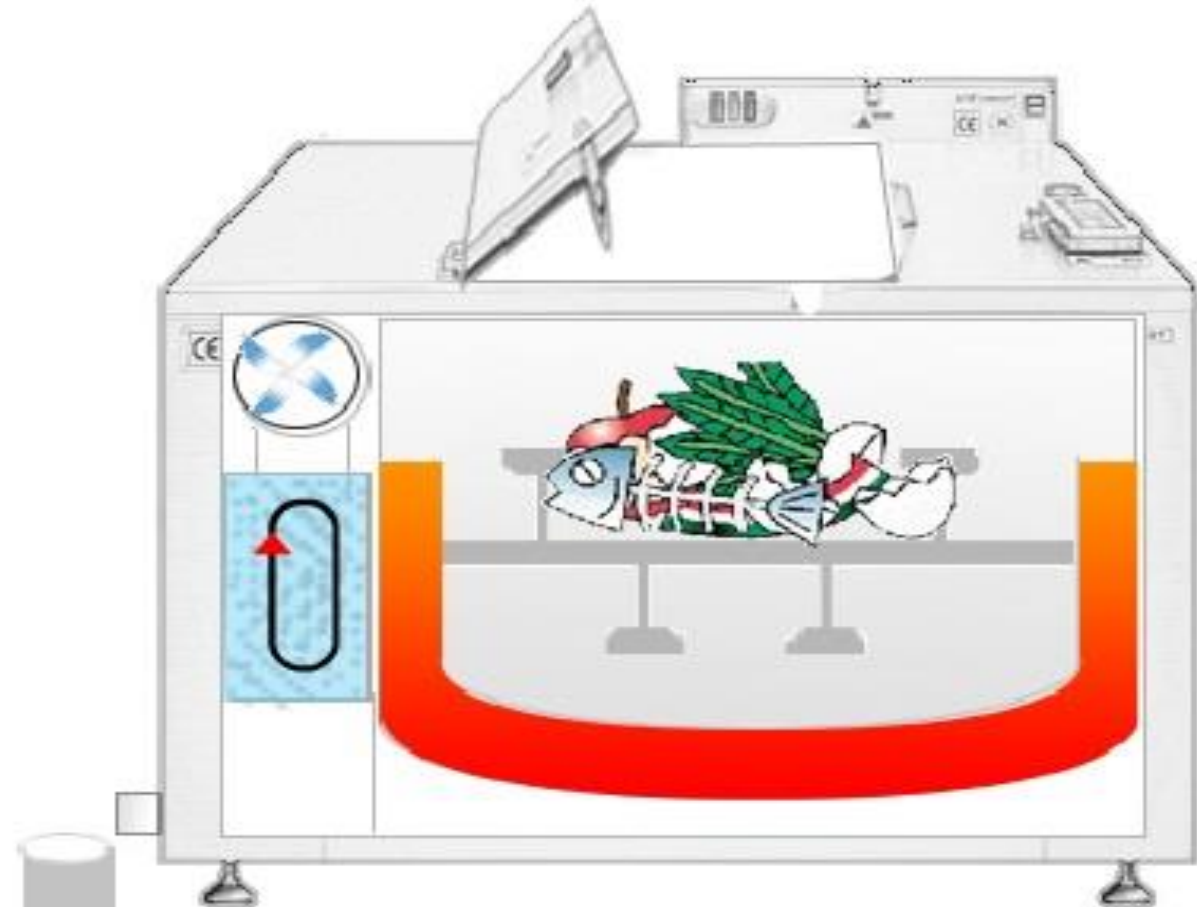
- 1) Shredder & Dehydrator
- 2) Dryer
- 3) Dryer (lifter)
- 4) Microorganism Fermentation & Dissipation



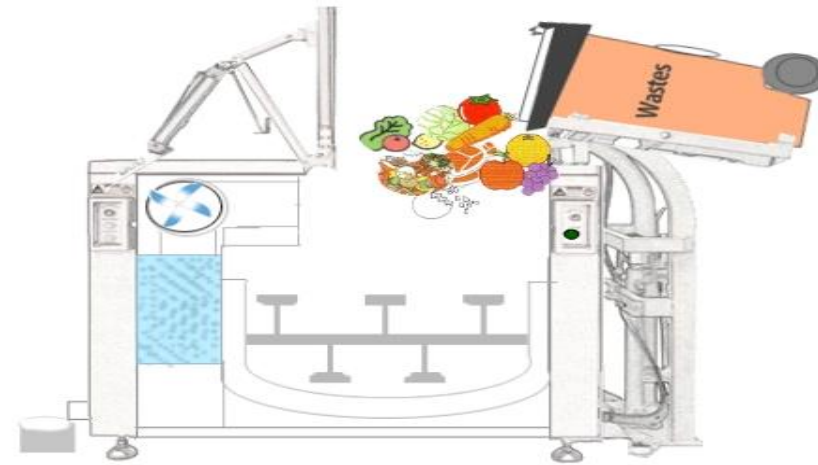
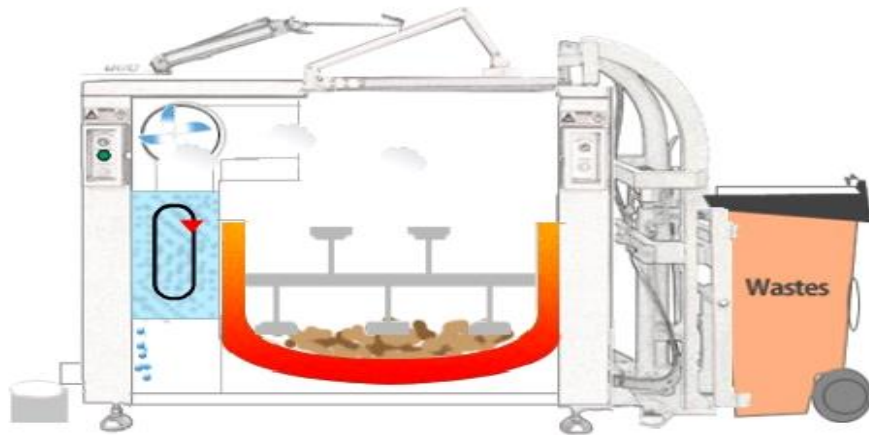
# 1) Shredder & Dehydrator



## 2) Dryer



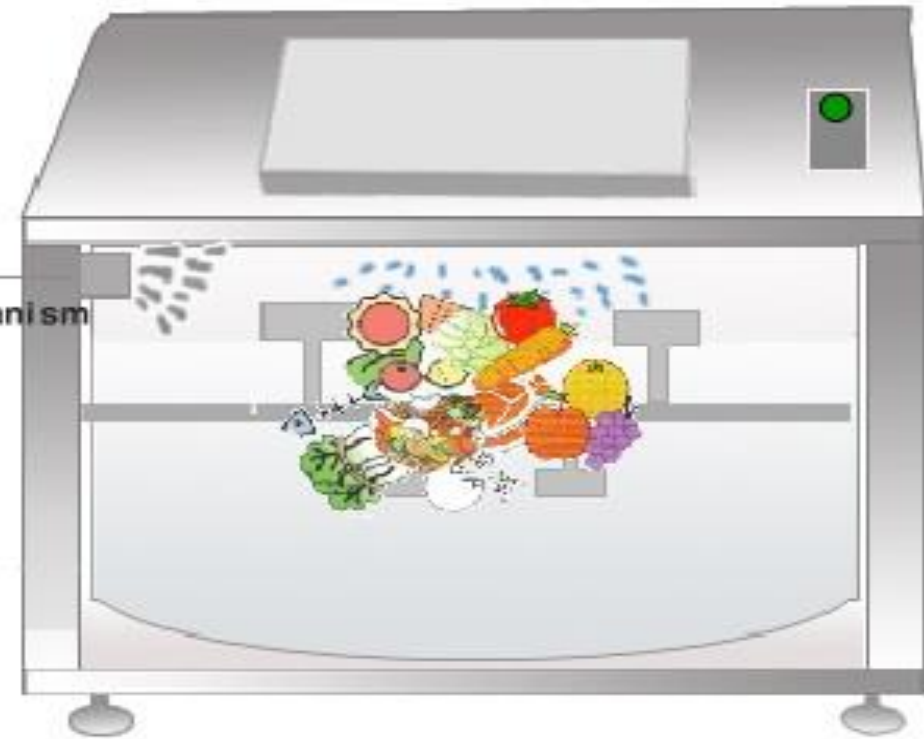
### 3) Dryer (lifter)



## 4) Microorganism Fermentation & Dissipation

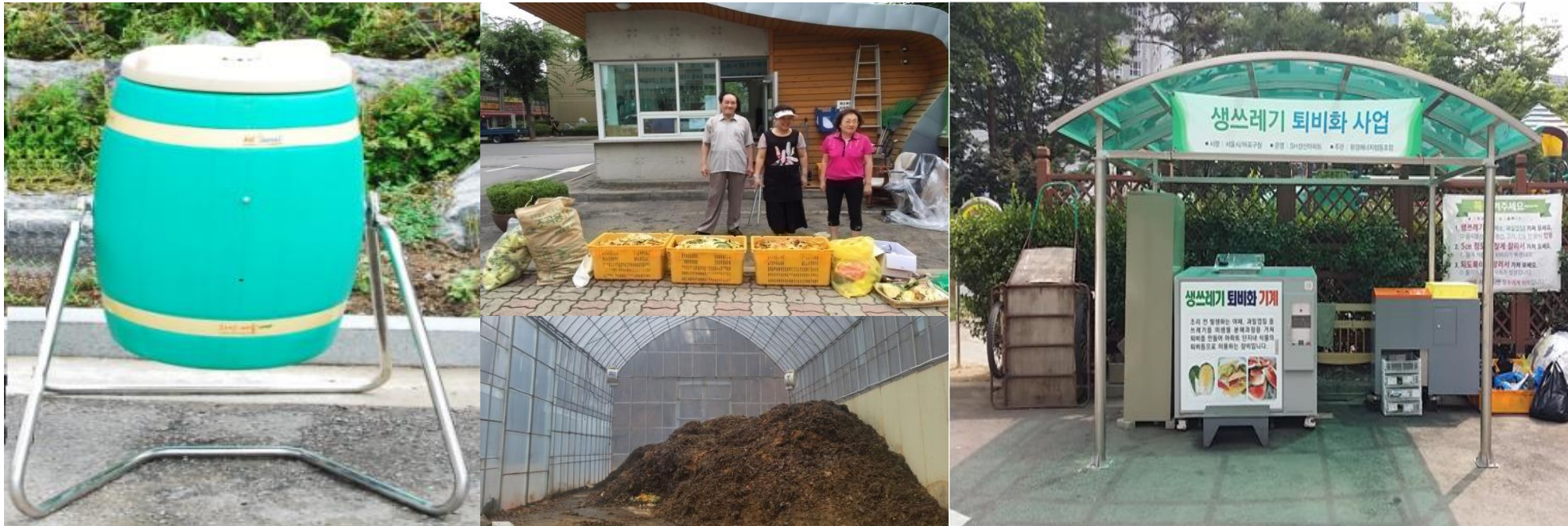


미생물 분사  
Auto Spray  
Input of microorganism



## 4. Raw Food Waste Composting

- 1) Compost Bins
- 2) Compost at Weekend Farms
- 3) Compost Equipment





# 1) Compost Bins



## 2) Compost at Weekend Farms



Discharge(household)



Collection by vehicles



Compost



Crop cultivation

### 3) Compost Equipment



## ❖ Compost Equipment Process



Put Sawdust



Add Microorganism



Put Raw Food Waste



Stir

# 5. *Ptecticus tenebrifer*



## 6. Earthworms



Thank you for Your attention

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