

# Introduction of Pilot Scheme on Food Waste Collection

7 July 2022



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Environmental  
Protection Department



# Rundown

1. Challenges
2. Food Waste Management Strategies
3. Support to the Trade
4. Smart Technologies
5. Opportunity & Responsibility
6. Q&A



# Challenges



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# What is Food Waste?

生、熟、吃剩或變壞食物也是「可回收廚餘」。  
Raw, cooked, leftover or spoiled food is 'recyclable food waste'.



**穀物**  
Wheat & Grains  
米飯、粉麵、麵粉、  
麵包、燕麥



**蔬果**  
Fruits & Vegetables  
水果、蔬菜、菇類、  
豆類及其製品  
(包括皮、核、種子)



**肉類**  
Meats  
豬肉、牛肉、海產、  
家禽及其製品 (包括  
內臟、魚鱗、小骨頭)



**殘渣**  
Residues  
茶葉渣、湯渣、  
咖啡渣、中藥渣



**其他**  
Others  
乳製品、甜品、堅果、  
醬料、寵物食品



**惰性物料**  
Inert Materials  
包裝袋、飲管、罐頭、  
餐具/餐盒、玻璃樽、  
茶包、紙巾、牙籤



**水分過多廚餘**  
Watery Food  
湯、粥、飲品

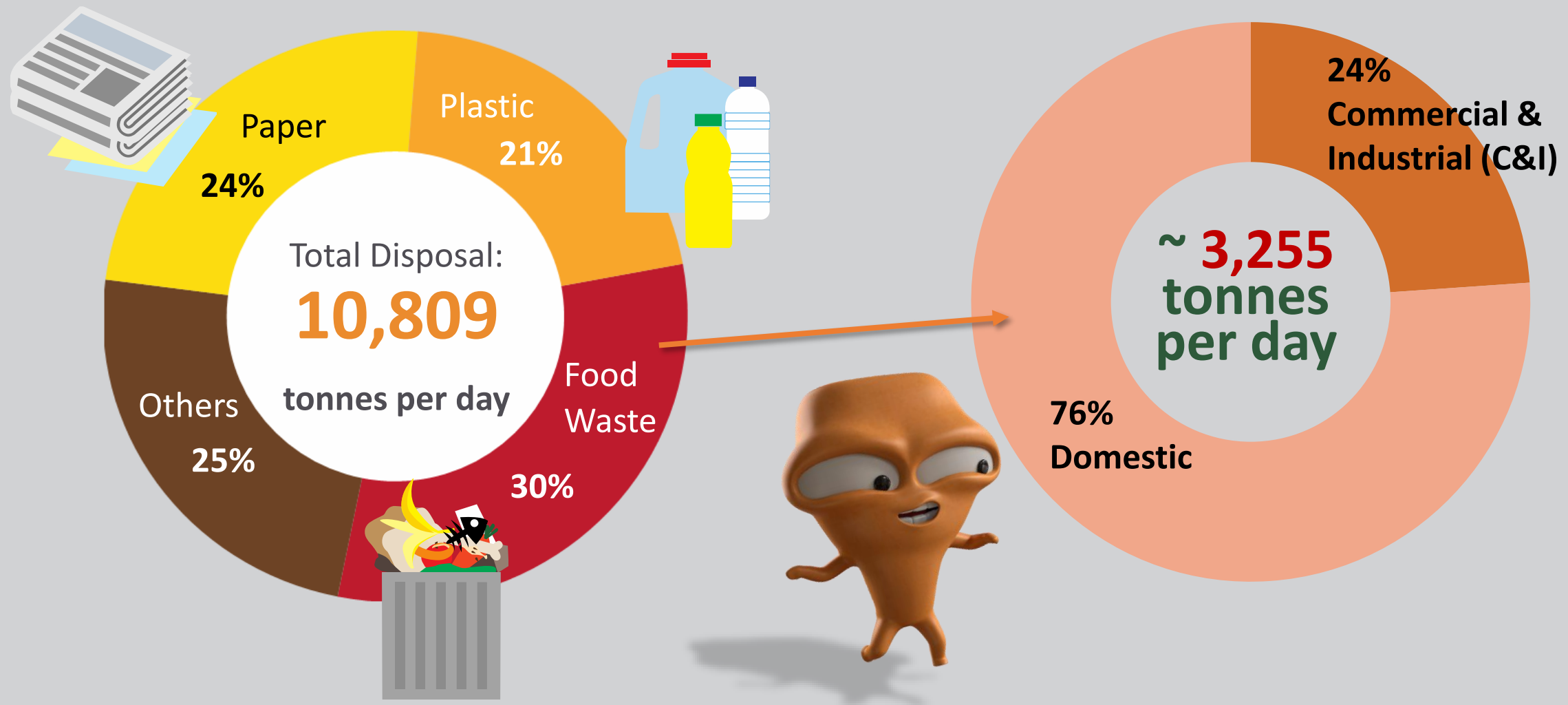


**過硬物料**  
Hard Materials  
貝殼、蟹蓋、榴槿殼、  
粟米芯、椰青、芒果核



**過大物料**  
Oversized Materials  
豬筒骨、斧頭扒骨

# Disposal of Municipal Solid Waste (2020)



~ **3,255** tonnes food waste per day

= Weight of  
**20,000,000**



# Problems of Food Waste

Depletes  
limited **landfill**  
**space**

Creates **odour**  
nuisance

Emits **landfill gases**  
(as greenhouse gases)

Squanders  
useful **organic**  
**resources**

Generates  
**leachate**



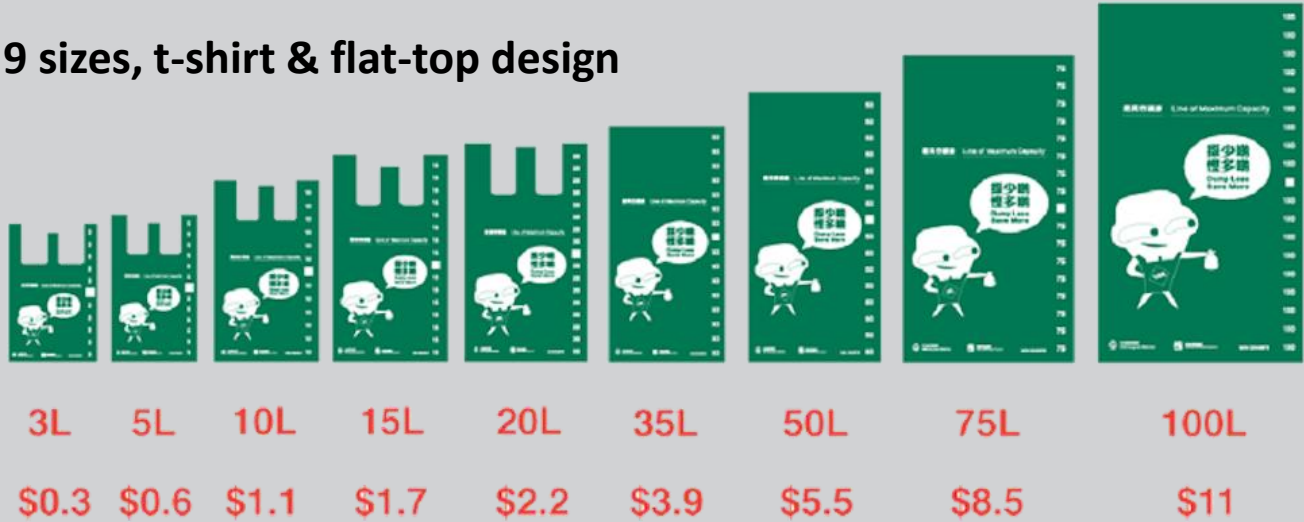


# Municipal Solid Waste Charging to be implemented in 2023

## Bear the Cost for

- i) Designated Garbage Bags (i.e. MSW charging) +
- ii) Delivery of waste for disposal (for cleansing contractor)

### 9 sizes, t-shirt & flat-top design



Oversized waste \$11 per piece



# Food Waste Management Strategies



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# A FOOD WASTE & YARD WASTE PLAN FOR HONG KONG 2014-2022

Environment Bureau



February 2014

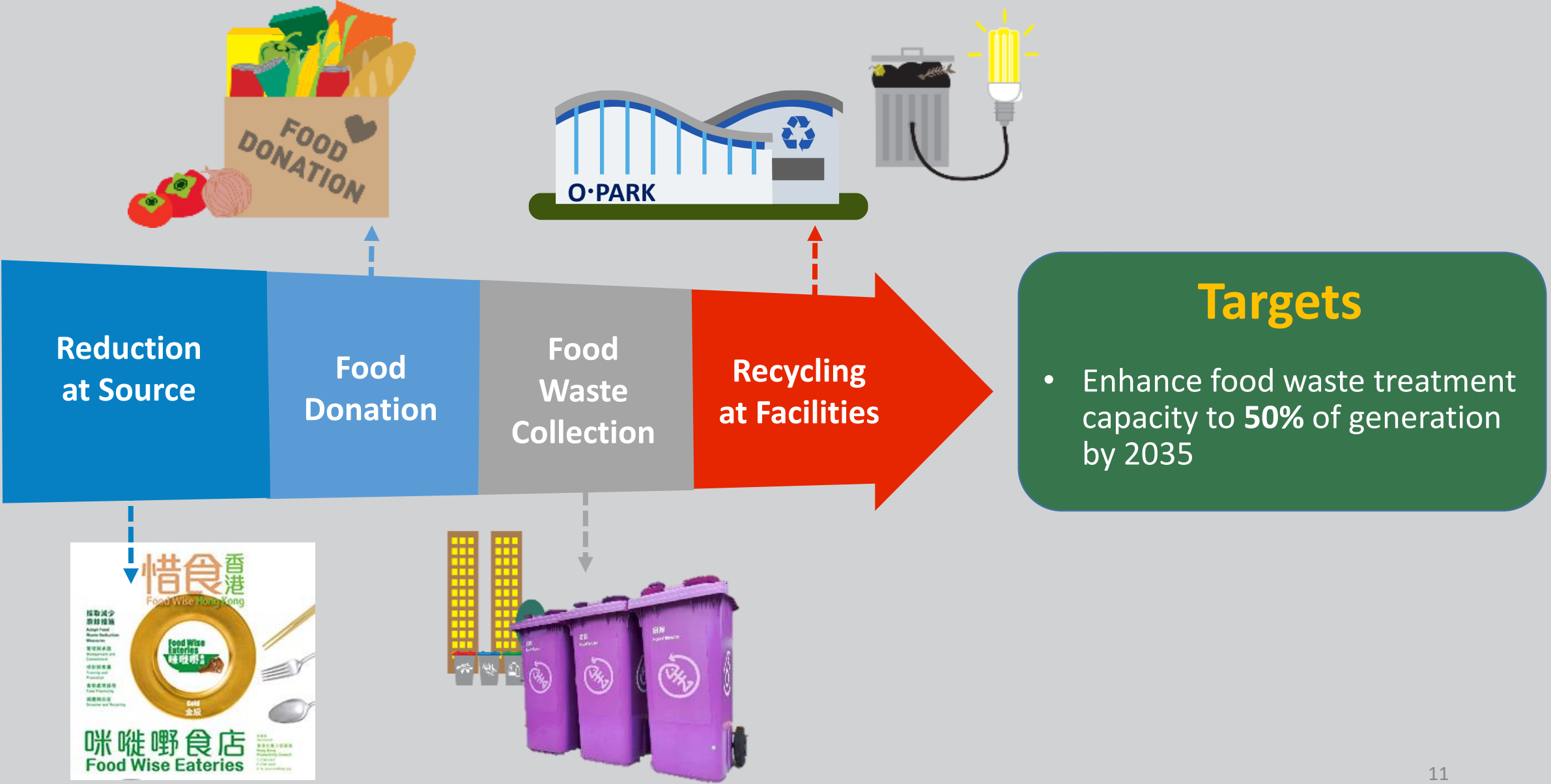
February 2021

# WASTE BLUEPRINT for Hong Kong 2035



環境局  
Environment  
Bureau

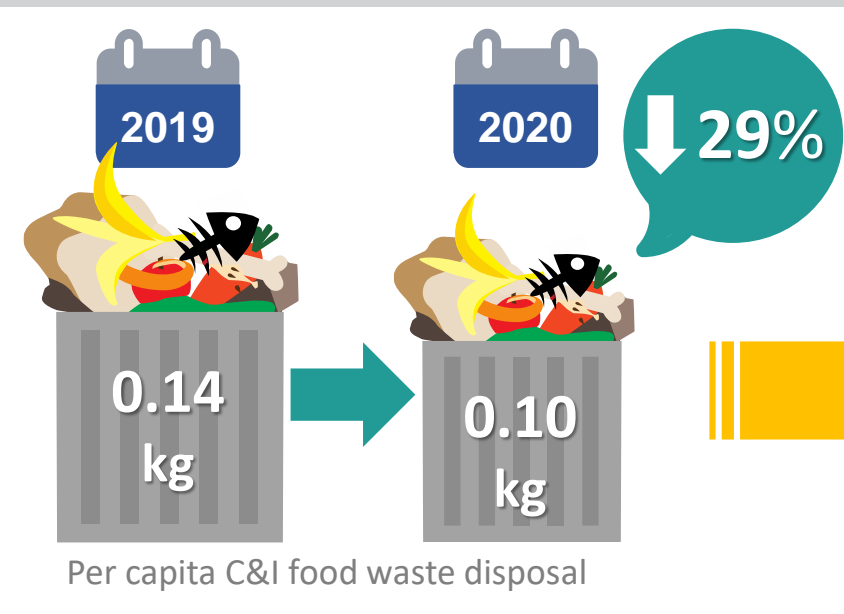
# Food Waste Management Hierarchy



- ① Reduction at Source
- ② Food Donation



# Food Wise Hong Kong Campaign



**1** **Food Wise Eateries**  
**咪咗嘢食店**

~ 1,200 participating Food Wise Eateries Scheme

**2** ~ 1,100 Food Wise Charter signees

我們承諾成為惜食伙伴  
全力支持「惜食香港」運動，  
致力減少廚餘。  
AS A FOOD WISE PARTNER,  
WE ARE COMMITTED TO SUPPORTING  
FOOD WISE HONG KONG CAMPAIGN,  
AND REDUCING FOOD WASTE.

**3**

- 130 workshops & talks
- > 11,700 participants

**4**

- 79 projects with 16,900 tonnes of surplus food donated
- \$164M funding support

**5**

大咗鬼 Big Waster  
>83,100 likes

@big\_waster\_hk  
>14,000 followers

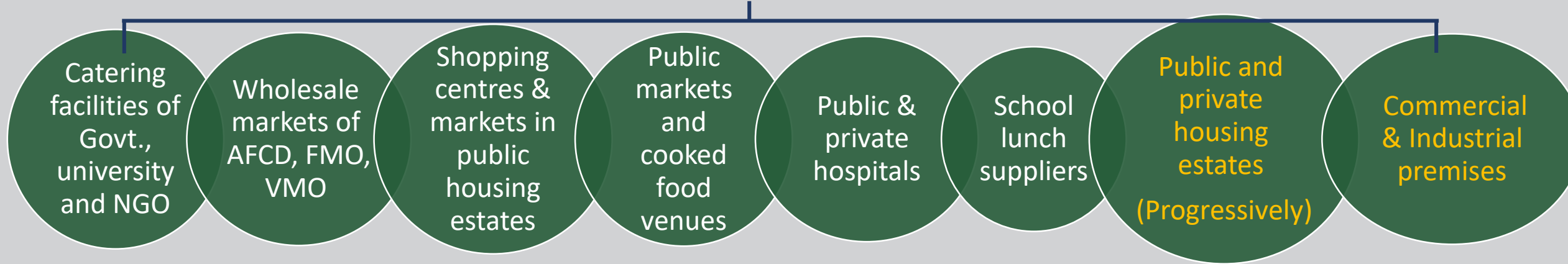
# ③ Food Waste Collection



# Pilot Scheme on Food Waste Collection

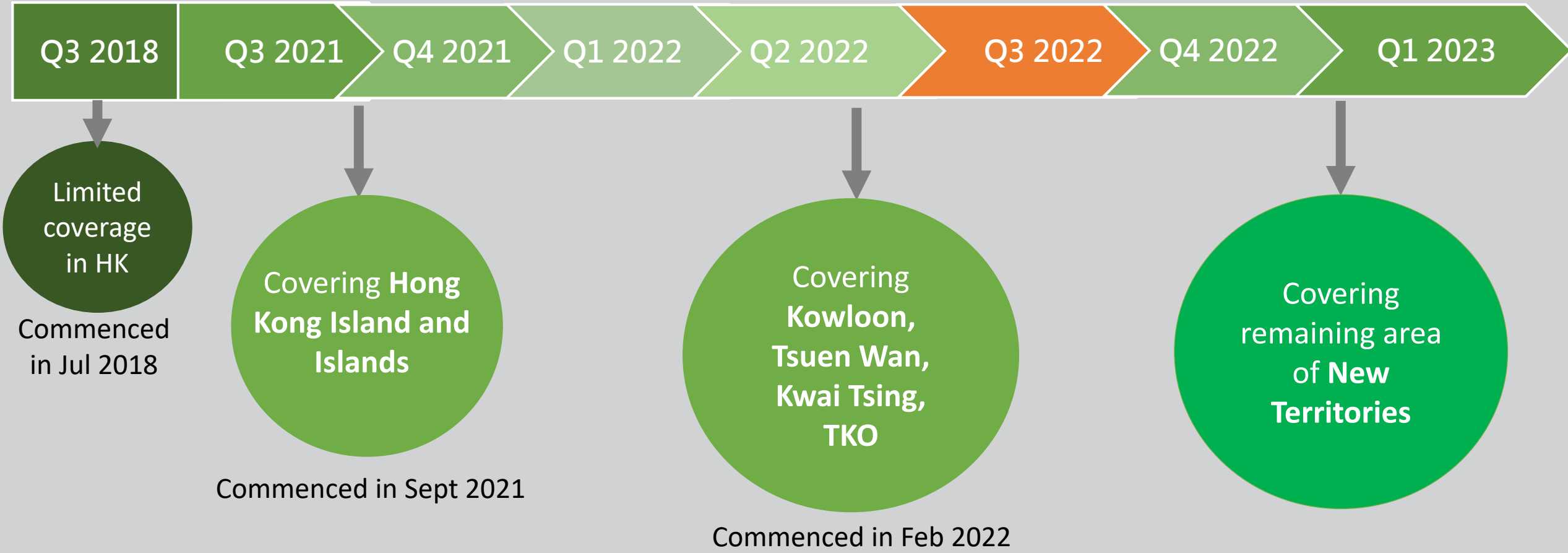
- Starting in 2018, then expanded to cover C&I sector & more residential premises in 2021

**Recruitment of participants in progress**



# Food Waste Collection Pilot Scheme

## Implementation Timeline





# Food Waste Collection Service (Free of Charge)



## Application Assessment

## Site Visit

## Training

- Interested premises to submit Application Form

- On-site evaluation of estimated food waste quantity, food waste collection time and location

- Training to frontline staff
- Guidance on food waste source-separation & recycling

**廚餘收集先導計劃申請表**  
Application Form for Pilot Scheme on Food Waste Collection

機構/公司名稱 / Name of Organisation / Company: \_\_\_\_\_

(行號) \_\_\_\_\_

(地址) \_\_\_\_\_

請填寫廚餘收集點詳情 / Please fill in Details of Food Waste Collection Point

1	地址 (收集點) / Details (see Note 2)	<p>請仔細填寫下列表格上之格:</p> <p>常備收集點 / 九龍 / 新界</p> <p>Please put a "x" at the appropriate box:</p> <p>(Hong Kong) / (Kowloon) / (New Territories)</p>
2	地址 / Address	
3	建議開始廚餘收集服務日期 (如適用) / Suggested Commencement Date of Food Waste Collection Service (see Note 3)	
4	現有的廚餘收集服務合約預計已使用 / Expiry Date of an Existing Food Waste Collection Contract (if any)	
5	預計每日可收集廚餘量 (公斤) / Estimated Weight of Daily Recyclable Food Waste (kg)	
6	建議每日收集次數 (如適用) / Suggested No. of Collection per day (see Note 4)	
7	建議收集時間 (如適用) / Suggested Time of Collection (see Note 5)	



# Food Waste Collection Service (Free of Charge)

## Set up



## Source Separation



## Collection

- Food waste bins
- Liner bags (provided by EPD)

- Recyclable Food Waste only (packaging should be removed)

- Fixed collection point & time
- Conduct in off-peak hours as far as possible



# Food Waste Collection Service (Free of Charge)

## Collection Vehicles



## Smart Weighing System



## Recycling at Facilities

- Side-loader tankers
- Tailgate trucks



- Real-time data synchronization and Cloud Management System
- Collection data monitoring by EPD



- Food waste delivery to O-PARK1
- Turning food waste into energy & compost



# ④ Recycling at Facilities



# Facilities for Food Waste Recycling



Power  
Generation



Compost



Carbon  
Reduction



○ ■ PARK1 (Siu Ho Wan)  
- In operation



○ ■ PARK2 (Sha Ling)  
- Commence in 2023/24

+ Sludge / Food Waste Co-digestion Trial Plants at Tai Po and Shatin Sewage Treatment Works

# O·PARK1 Visitor Centre

- Launched in March 2021
- Tour to introduce **food waste recycling journey**
- Visitor number up to 4,000
- Accept both **individual & organisation** booking  
(special arrangement for schools)
- Open 6 days a week (Tue off) –  
\* closed due to pandemic

## ***Tour Reservation:***

*<https://www.opark.gov.hk/en/tour.php>*



# Opportunity & Responsibility



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# Pilot Scheme on Food Waste Collection

## Are you aware?

1. Reduce Waste Charging \$
2. Reduce odour after separation
3. Enhance green brand image
4. Save Resources, Help the Environment

Sufficient food waste quantity to join the free service?



Limited Quota (first come, first served)



# Actions for Property Management

## Preparation Stage

- Identify appropriate **areas** for placing food waste bins
- Arrange suitable **time and location** for food waste collection

## Implementation Stage

- Collaborate with EPD to encourage tenants/residents to join food waste recycling
- Facilitate on-site/off-site promotion
- Ensure collected food waste without general waste

### **Manage cleansing contractor to:**

- Replace full-loaded bins
- Clean frequently to prevent odour / environmental hygiene issues

# Support to the Trade



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# General Support

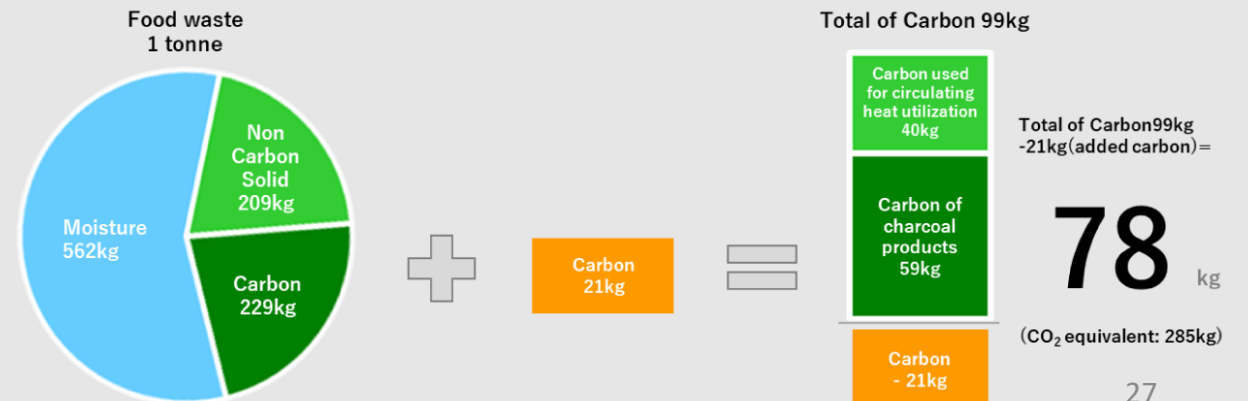
## On-site training & Technical support



## Monthly food waste collection record



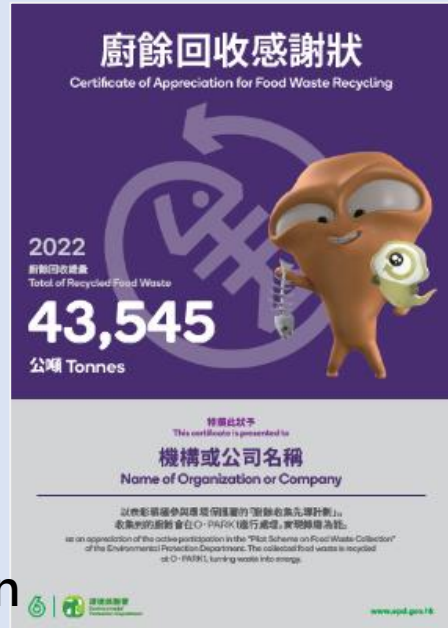
## Carbon reduction statistics



# Publicity Materials



Leaflet/  
Booklet



Appreciation  
Certificate



Recognition Label



Source Separation Guidelines



Organization Logos  
on EPD website

# On-site Promotion (Exclusive to Domestic Food Waste)

- Educational support and training to **housing estates** joining food waste collection
- Collaboration with Green Outreach Team for community promotion in housing estates



## Promotion to highlight:

- ✓ Clean Source Separation of Food Waste
- ✓ Benefits of Food Waste Recycling

# Smart Technology for Food Waste Collection



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# Food Waste Smart Bins

(for Domestic Food Waste)



## Features

- 24-hour operation
- Auto-door opening
- Auto-weighting device
- Fill-level sensor
- Auto-notification when full
- Disinfection device / odour abatement system
- Connect to GREEN\$ reward under “6” brand of EPD

## Benefits

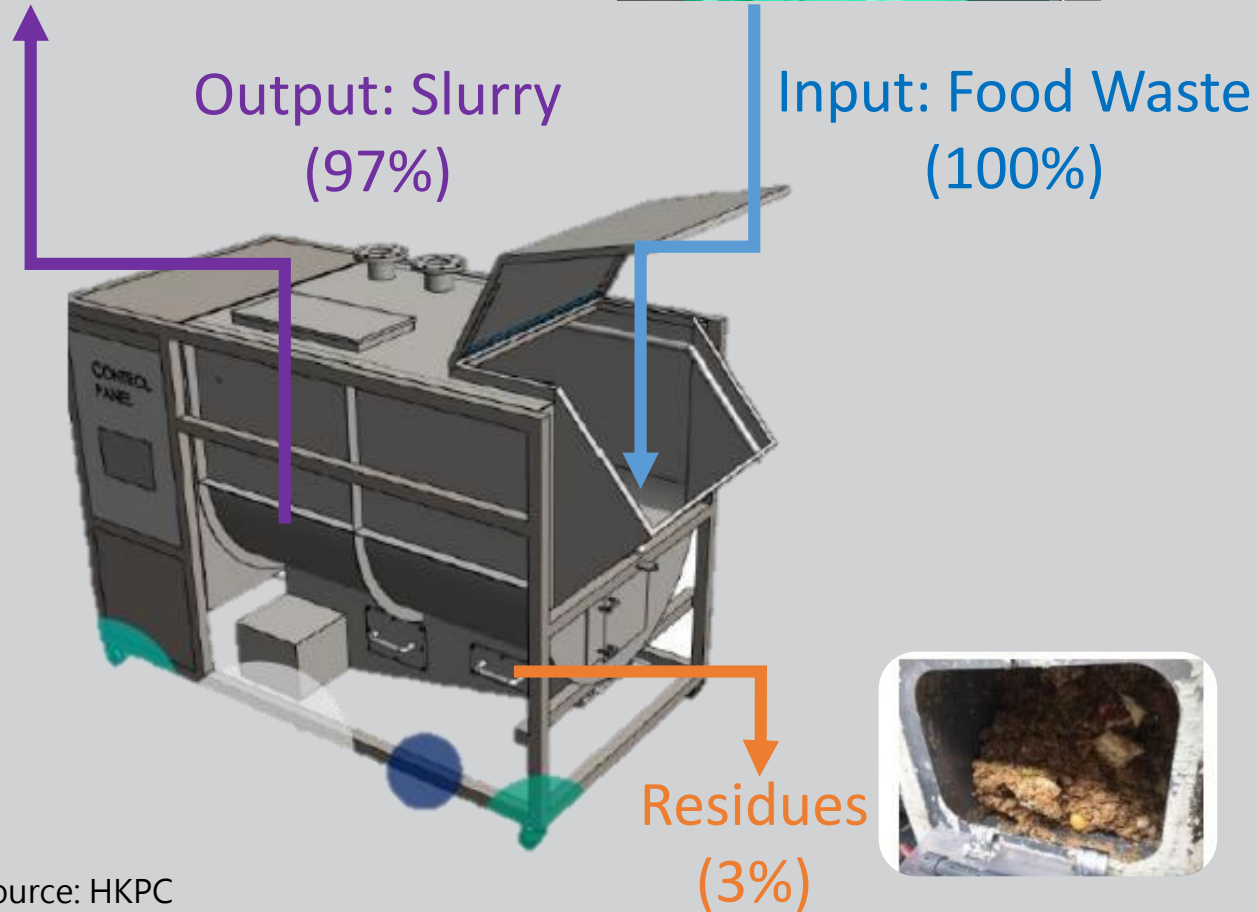
- Improve hygiene conditions
- Allow self-tracking record
- Encourage participation with reward

Funding Scheme details:

[https://www.recyclingfund.hk/mobi/en/application\\_isp\\_theme.php](https://www.recyclingfund.hk/mobi/en/application_isp_theme.php)

# Food TranSmarter

\* Grand awards at the City I&T Grand Challenge  
Organised by the Innovation and Technology Commission



## Features

- Application of engineering and biodegrading technology
- Auto source-separation
- Only limited water and power required
- Slurry collected by suction trucks (e.g. once/week) to EPD's facility for recycling

## Benefits

- Save kitchen space for bin storage
- Tidy & clean operation
- Air-tight system to reduce odour
- Efficient & flexible collection logistics
- Reduce manpower for daily handling
- High tolerance of impurities (collected as residues)



# Food TranSmarter



Capacity	500 kg/day	1000 kg/day	2000 kg/day
Dimension (m) (L x W x H)	2.4 x 1.2 x 2.2	2.8 x 1.8 x 2.5	5.0 x 2.0 x 3.0
Space (m <sup>2</sup> )	4.0	6.7	12.7
Water usage per day (L)	500	1,000	2,000
Electricity usage per day (kWh)	60	97	137

# Let's all participate in Food Waste Recycling!

Email: [fwc@epd.gov.hk](mailto:fwc@epd.gov.hk)

Tel.: 2838 3111



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