





**16/12/2016**




Members of Advisory Committee on Recycling Fund visited Guangzhou on 16 Dec, 2016 in order to understand and make reference to the recycling industries in other jurisdictions.

# Background

## Purpose

-  In order to understand and make reference to the recycling industries in other jurisdictions, the Recycling Fund Secretariat organised a study mission to Guangzhou, China on 16 December 2016.
-  Visit to 3 community green station and recycling facilities

## Participants

-  **RFAC Members**  
(2 members - Jimmy Kwok, Yip Hing Kwok)
-  **Representative from Recycling trade and NGOs**
-  **~ 50 participants**



# 越秀區餐廚垃圾生物處理示範站

- ❿ The government collect and transport the food waste to the treatment facilities, the treatment and handling of end products are handled by enterprise, which share the burden of government
- ❿ The cleaners collect the food waste separated by the residents for further sorting, the enterprise then purchase the clearly separated food waste with the rate of ¥5/bin





# 越秀區餐廚垃圾生物處理示範站

- ❧ The machine can handle 10 tonnes/day (i.e. 3,600 tonnes/year), and they mainly collect household food waste instead of from commercial sectors
- ❧ The facility can save up to **¥600,000** landfill handling fee
- ❧ The fee has turned into the food waste recycling operation cost for the enterprise



# 珠光街江灣垃圾分類綜合減量站

- ❿ The separation center located under the bridge in the city center
- ❿ Total 4 similar separation centers in the district, and also 24 wood and 21 glass collection points
- ❿ The site will only process low-value recyclables, i.e. food waste, wood, glass, furniture etc
- ❿ Monitor by government, operate by enterprise
- ❿ The recyclables collected will be sold to other enterprise

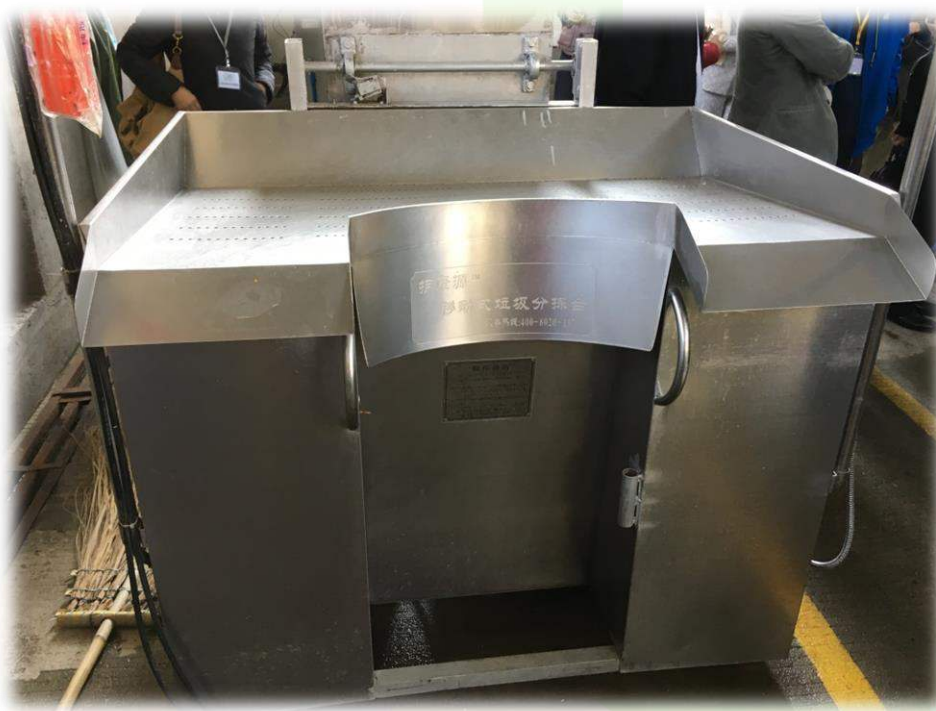




# 珠光街江灣垃圾分類綜合減量站

## 🌿 Food waste:

- 🌿 The initially separated food waste by the residents will be gone through another round of detail separation



# 珠光街江灣垃圾分類綜合減量站

## 🌿 Glass :

- 🌿 The worker separate the glass bottle according to their color
- 🌿 Glass bottle collection amount: 300 tonnes/month
- 🌿 Market price for the glass:  
¥180 – 320 (depends on the bottle color)

## 🌿 Wood:

- 🌿 Wood collection amount: 600 tonnes/month
- 🌿 Market price for the wood:  
¥250
- 🌿 Wood will be sold to the incinerator operator as fuel for generation of electricity





# 珠光街江灣垃圾分類綜合減量站

## ❧ Harmful waste:

- ❧ Around 585 harmful waste collection point in the district
- ❧ Harmful waste including medicine, pesticide / lubricant / solvent packing, thermometer, batteries and florescent light bulbs etc
- ❧ At least 1 collection point within 1000 household
- ❧ The harmful waste from each collection point will transport to each separation site





# 珠光街江灣垃圾分類綜合減量站

## Effect:

- Food waste reduction by 10%, glass and wood reduction by 2%
- More than 3000 tonnes of glass and 4000 tonnes of wood being collected and recycled in a year
- Over 3 million dollars can be received by selling wood and glass to the enterprise
- Each collection point with net balance of ¥10,000 – 20,000



# 廣東省輕工學院: 試點智能化垃圾分類項目

- Project executed since April 2014
- Consist of 3 parts:
  - “Smart bin”
  - Green community platform
  - “Big data” monitoring system
- No. of users: 200 – 400
  - Mainly elderly, mobile residents and students
- Waste separated into 4 categories:
  - Food waste
  - Recyclables
  - Harmful waste
  - Other waste





# 廣東省輕工學院: 試點智能化垃圾分類項目

- ❶ **“Smart bin”**
- ❷ Weighing scale
- ❸ Card reader
  - ❶ Resident has to swipe the card before throwing the trash
  - ❷ 10 points for throwing the trash, another 60 points for throwing them into the right bin
- ❹ Cleaners will cross check the data for authentication





# 廣東省輕工學院: 試點智能化垃圾分類項目

- 🌱 **Green community platform**
- 🌱 The card record the points of each users
- 🌱 Users can use the points to exchange daily commodities, i.e. toilet paper, food, tooth pick etc
- 🌱 For the student version green platform, students can even use the points in exchange of bread or mobile phone rental service



# 廣東省輕工學院: 試點智能化垃圾分類項目

## “Big data” monitoring system

- The central station to trace back all the “trash related” activities in the neighborhood
- Analysis the data of participating rate, rubbish bin capacity, points accumulated of each resident etc


广东省>广州市>海珠区>琶洲街道>广东轻工(广州校区)西校区					
当前垃圾产生量					
可回收物	其它垃圾	厨余垃圾	有害垃圾	预计减量	总重量
3.587kg	55.319kg	47.619kg	0.000kg	51.206kg	106.525kg
区域当前垃圾产生量					
区域	可回收物	其它垃圾	厨余垃圾	有害垃圾	分类正确率
西校区正门投放站	1.263kg	10.443kg	25.822kg	0.000kg	3.33%
西校区教师宿舍18栋投放站	1.747kg	7.482kg	4.700kg	0.000kg	52.17%
西校区铭志轩投放站	0.000kg	36.594kg	11.207kg	0.000kg	64.00%
西校区8栋投放点	0.577kg	0.800kg	5.890kg	0.000kg	0.00%



# Lessons Learnt

- ♻ Well use of space under fly-over for recycling related activities.
- ♻ Good reference IT system for waste charging scheme.
- ♻ “Redemption point” is a good incentive for encouraging proper recycling.





The content and materials herein are provided on an “as is” basis. The Recycling Fund Secretariat makes no representations or warranties of any kind with respect to the accuracy and correctness of the content and materials herein.

The Recycling Fund Secretariat asserts a claim of copyright for compilation of presentation slides, unique scope, style, design, look and feel. All third party information featured in this presentation slides remain the intellectual property of their respective originators.

No person may distribute, modify, transmit, reuse, re-post, or use any part of this presentation without the prior written permission from The Recycling Fund Secretariat.

