








**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.

## 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

- ❿ 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
- ❿ The facility can save up to ¥600,000 landfill handling fee
- ❿ 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

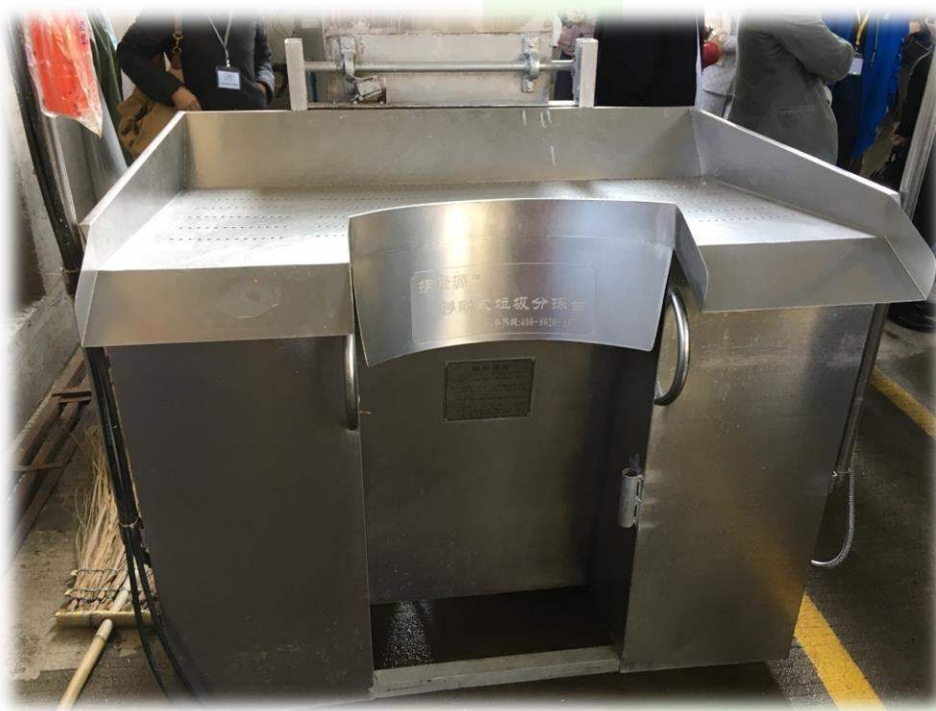
- ❿ The separation center located under the bridge in the city center
- ❿ Total 4 similar separation centers in the district, and also 24 wood and 21 glass collection points
- ❿ The site will only process low-value recyclables, i.e. food waste, wood, glass, furniture etc
- ❿ Monitor by government, operate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





## ♻️ Food waste:

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



## ♻️ 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





## ❿ Harmful waste:

- ❿ Around 585 harmful waste collection point in the district
- ❿ Harmful waste including medicine, pesticide / lubricant / solvent packing, thermometer, batteries and florescent light bulbs etc
- ❿ At least 1 collection point within 1000 household
- ❿ 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



- 🌱 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





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





- 🌱 **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



## 🌿 “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>饭港街道>广东轻院(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	总重量
西校区正门投放站	1.263kg	10.443kg	25.822kg	0.000kg	3.33%	37.528kg
西校区教师宿舍18栋投放站	1.747kg	7.482kg	4.700kg	0.000kg	52.17%	13.929kg
西校区铭志轩投放站	0.000kg	36.594kg	11.207kg	0.000kg	64.00%	47.801kg
西校区8栋投放点	0.577kg	0.800kg	5.890kg	0.000kg	0.00%	7.267kg



# 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.





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