

Recycling Fund: Smart Recycling Fleet Routing and Weighing System Scheme

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What is Smart City Consortium



We are a
group of
professionals
from different
sectors

Provide
opinions and
suggestions
to the
Government

Encourage
worldwide
collaboration

Foster
innovation and
sustainable
economic
growth



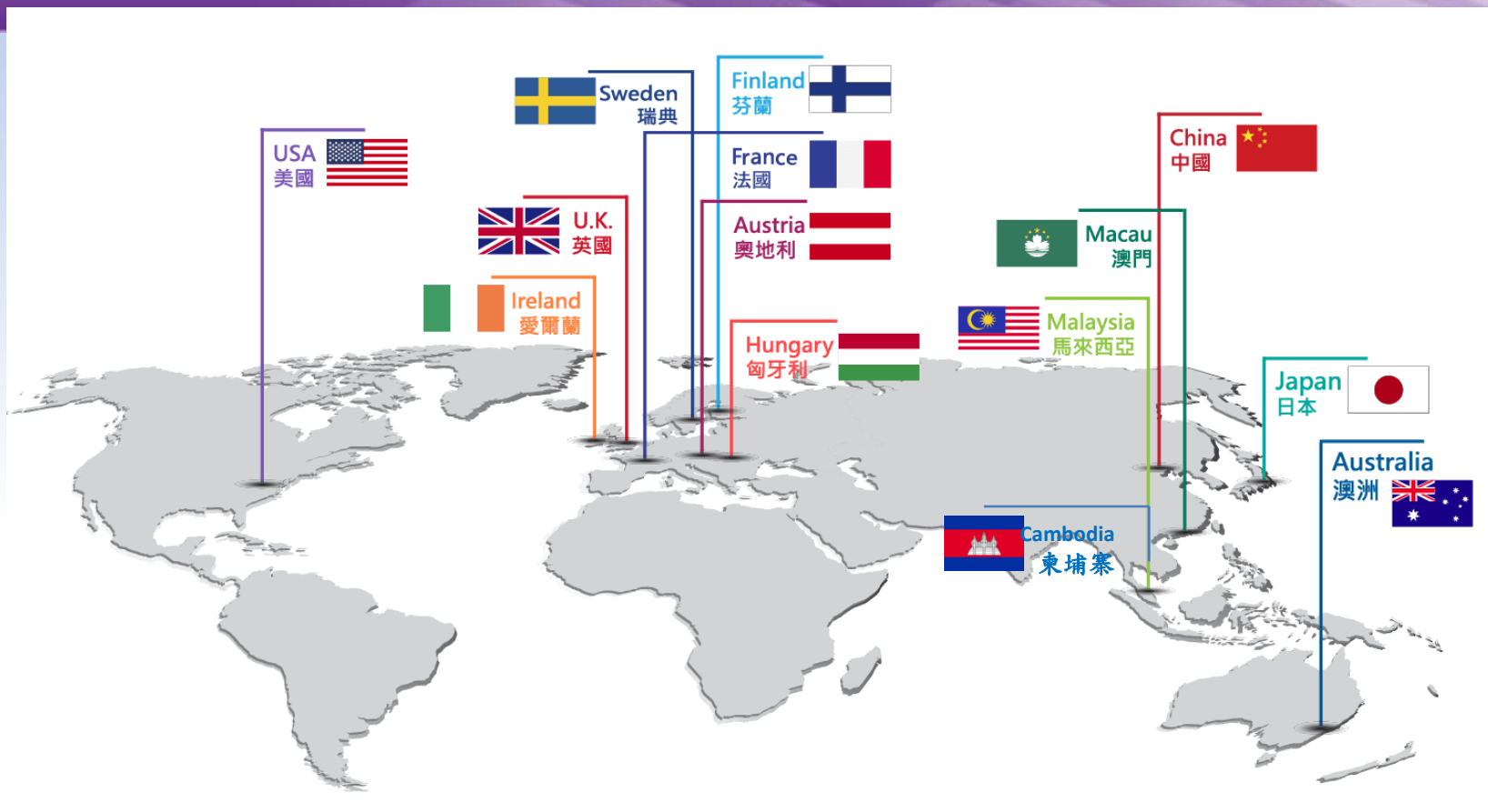
5+

Years



350+

Events



43
MoUs

14
**Countries &
Regions**



~300
Members

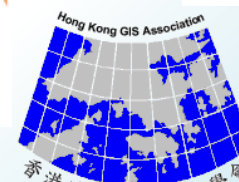
24
Committees

4
SIGs

Partnership with International and Local Organisations

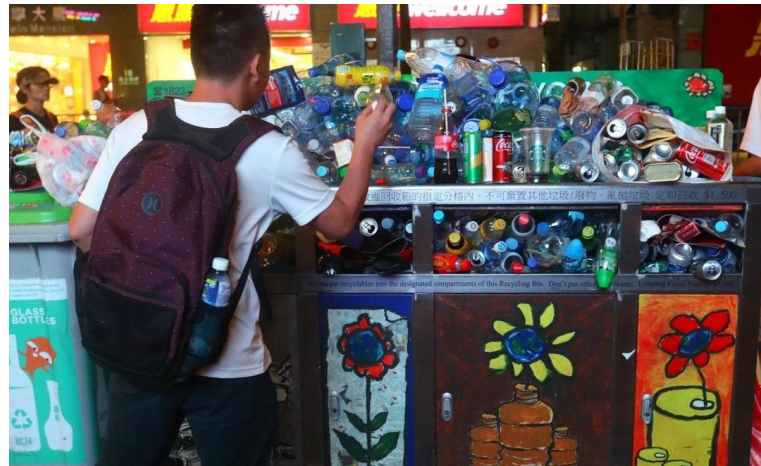
Global Alliance

Local Alliance



Current Challenge of Recycling Industry in HK

High labor
cost



Difficult to
predict the
recyclables
collection time

Difficult to
optimize the
collection
routes for
vehicles



Unable to
ensure accurate
weighing of
recyclables of
each residential
site



Near 4 million
granted



To conduct a pilot
study for smart
routing and weighing
system



Enhance the
collection efficiency
of paper, plastic and
aluminum recyclables

Implementation Organization :
Hong Kong Quality Assurance Agency



3 Types of Digitalisation in Pilot Study

Type A
Smart
Routing
Optimization

No fixed collection time

Type B
Smart
Weighing
Optimization

Fixed collection time

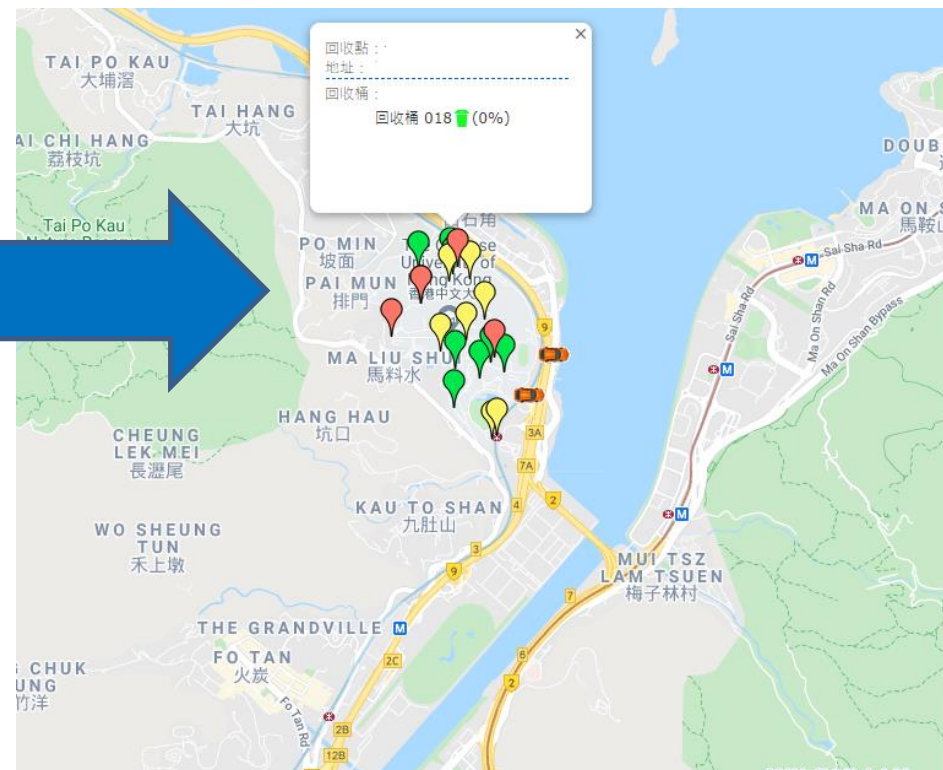
Type C
Mixed
Type A and
Type B

Flexible collection time



Type A - Smart Routing Optimization

- Fill level sensor provides real-time filling level of the bins/cages



- Route optimization by using GIS
- Phone apps assisting truck drivers

Type B - Smart Weighing Optimization



- RFID reader & electronic scale are installed in the pallet truck
- RFID tags are embedded on the bins/cages
- Pallet truck will identify the ID of the bins/cages when measure the weight of the recyclables
- Data including bins/cages' ID & weight will be transferred online wirelessly to backstage system



Welcome to SCC System Platform
(Smart Routing and Weighing System for
Recycling of Solid Waste)

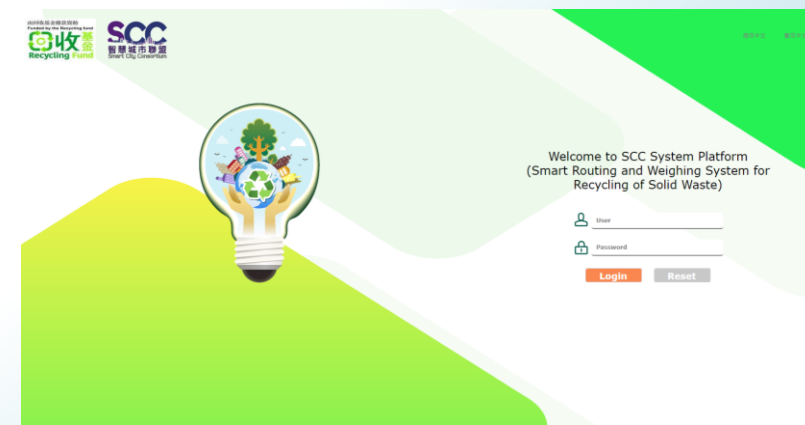


Login

Reset

Smart Routing and Weighing System

- Increase the operation efficiency
- Optimize the resource utilization
- Reduce the transportation cost
- Optimize the quantity of recycling vehicles and drivers
- Minimize the work load and human error



5 recyclers feedback are positive

Item	Scope	Scoring (from Lowest 1 to Highest 5)
System Application and Mobile Apps	<ul style="list-style-type: none"> Recyclables collection fleet arrangement Vehicles control Recyclables collection time Drivers working status & etc 	4.26
Smart Devices	<ul style="list-style-type: none"> Recyclables fill level monitoring Sensors operations Weighing system accuracy & etc 	4.16
Optimization Effectiveness	<ul style="list-style-type: none"> Routing optimization Simplification of daily operation flow Reduction of labor and transportation cost 	3.96
	Total	4.12

Local aspect

- Continue to run the system as cost recovery basis for recyclers in Hong Kong

Global aspect

- Explore to Replicate and localise the system in Japan



For more information, visit
<https://sccgreentech.hk/en/>

Public-Private-People-Partnership (4P) Achieve the ultimate goal of “Smart City 3.0”



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