Enabling EPR in plastic waste using digital technology

August 25th, 2022
Ei Nozaki
Founder & CEO of RECOTECH

- Over 20 years of experience in the waste management and recycling industry
- Expertise in waste treatment and circulation in developing countries (working with JICA)
- Expert in plastic circulation in mega cities
- Developed POOL, a platform that allows manufacturers to procure waste as urban resources
Background

Urban Resource Circulation Platform
How it works

Waste Dischargers input Urban resource information and input collection requests

Resource Registration

Collection Request
How it works

Based on Waste Data, POOL Enables Optimal Collection Frequency and Loading
POOL ensures traceability by Integrating Data Collected From Each Stakeholder Involved in the Recycling Chain.
The final product's traced data can easily be managed and accessed on POOL while providing data on CO2 emissions.
Test potential use of PCR materials in manufacturers' products

Mechanical recycling of plastic waste
Chemical recycling test of dirty/multi-layered plastic

Collecting waste plastic in vehicles at the time of product delivery

Environmental impact and cost assessment of efficiency improved logistics

The University of Tokyo (Prof. Murakami)

Sorting and disposal of waste plastics from commercial facilities

Project overview
Operations

1 Target material

PE
Operations

2. Collection Target

3. Sort & register plastic

Plastic

5.0 kg

Register
4. Check collection requests, and input data.

5. Compress, sort by grade and input data.
Operations

6 Recycle and input quality data

7 Procure PCR material

• Quality
• Cost
• Waste prediction
• Traceability
• CO2 emissions
- Optimising collection and logistics, compression sites and recycling processes, reduces costs
- Providing sufficient data on quality and traceability, increases value of the recycled material
- Confirmed scalability and sustainability (environmental / economical)
Prospects

- Expanding the project nationwide, starting from major cities in Japan
- Aim to divert 20,000 tonnes of plastic from incineration annually by 2026
- Expanding collection targets for chemical recycling facilities as well as mechanical recycling

Locations:
- Tokyo
- Sendai
- Sapporo
- Nagoya
- Osaka
- Fukuoka

ALLIANCE TO END PLASTIC WASTE

Bureau of Environment
Tokyo Metropolitan Government
Waste management and recycling costs money.

- Visualization for enabling enforcement of EPR
- Each stakeholder should be able to commit and bear the costs fairly
- Create a circulation model that is economically sustainable
Thank you for your attention.

Contact:
info@recotech.co.jp

For more information:
https://recotech.co.jp/