



RECOTECH

Enabling EPR in plastic waste using digital technology

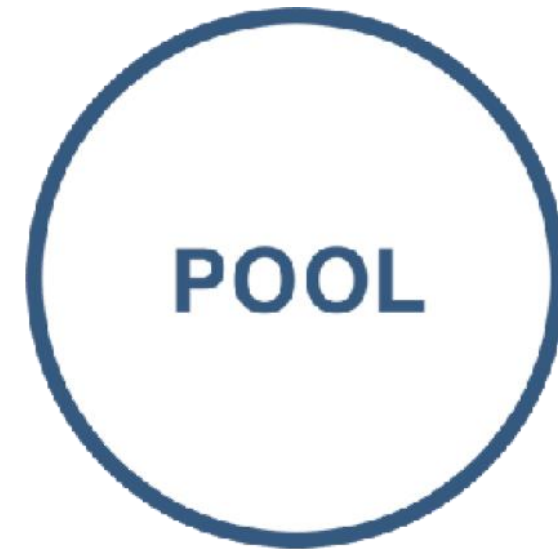
August 25th, 2022



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



Urban Resource Circulation Platform

トレースデータ検索 > XXXXXX トレースデータ

XXXXXXX Trace Data

Download CSV

Processing Data	Volume Reduction Data	Resource Data
製品登録日時：10/30 18:00 製造元：XXリサイクル施設	配送完了日時：10/29 18:00 配送先：XX分別施設	配送完了日時：10/27 18:00 配送先：XX減容施設
	配送完了日時：10/29 18:00 配送先：XX分別施設	配送完了日時：10/27 18:00 配送先：XX減容施設
	配送完了日時：10/29 18:00 配送先：XX分別施設	配送完了日時：10/27 18:00 配送先：XX減容施設
		配送完了日時：10/27 18:00 配送先：XX減容施設

任意
Plastic

定型
Plastic 5kg/45L

定型
Plastic 5kg/45L

Background

Missing Information |



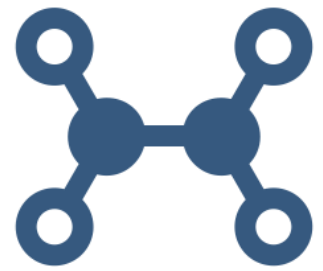
Quality



Cost



Volume



Traceability



Waste Dischargers input Urban resource information and input collection requests



Resource Registration

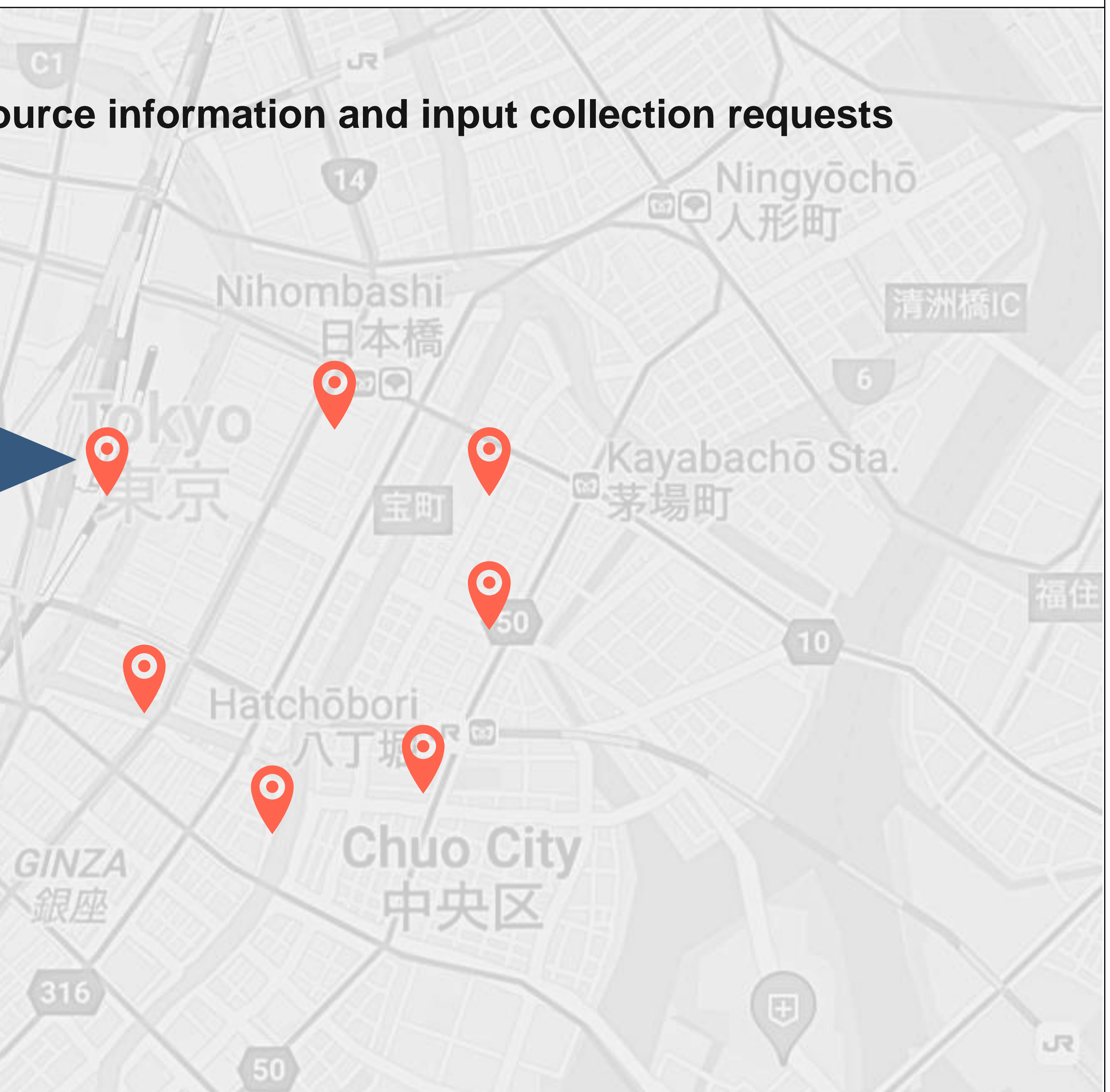
任意 Plastic
定型 Plastic 5kg/45L
定型 Plastic 5kg/45L

Collection Request

一括選択	内容	日時
<input checked="" type="checkbox"/>	Plastic 5.0kg/45L ×5個	10/30 19:00
<input checked="" type="checkbox"/>	Plastic 5.0kg	10/30 18:50
<input checked="" type="checkbox"/>	Plastic 5.0kg	10/30 18:40
<input checked="" type="checkbox"/>	Plastic 5.0kg	10/30 18:30
<input checked="" type="checkbox"/>	Plastic 5.0kg	10/30 18:20
<input checked="" type="checkbox"/>	Plastic 5.0kg	10/30 18:10
<input checked="" type="checkbox"/>	Plastic 5.0kg	10/30 18:00
<input checked="" type="checkbox"/>	Plastic 5.0kg	10/30 17:50

Total
Plastic 40kg

[Register](#)
[Edit Data](#)



Based on Waste Data, POOL Enables Optimal Collection Frequency and Loading



Resource Collection Requests

Collection List

Location List | Load List

Request

ABC Building 1F
Total 40kg
[Check location on Map](#)

Collect

Registration only

XX Building 1F
Total 40kg
[Check location on Map](#)

Collect

Registration only

XX Building 1F
Total 40kg
[Check location on Map](#)

Collect

XX Store
Total 20kg
[Check location on Map](#)

Collect

Total

Plastic 40kg

Collection Confirmation

Collection List

XX Building B1F

一括選択	内容	日時
<input checked="" type="checkbox"/>	Plastic 5.0kg/45L x5個	10/30 19:00
<input checked="" type="checkbox"/>	Plastic 5.0kg	10/30 18:50
<input checked="" type="checkbox"/>	Plastic 5.0kg	10/30 18:40
<input checked="" type="checkbox"/>	Plastic 5.0kg	10/30 18:30
<input checked="" type="checkbox"/>	Plastic 5.0kg	10/30 18:20
<input checked="" type="checkbox"/>	Plastic 5.0kg	10/30 18:10
<input checked="" type="checkbox"/>	Plastic 5.0kg	10/30 18:00
<input checked="" type="checkbox"/>	Plastic 5.0kg	10/30 17:50

Total

Plastic 40kg

Collect

[Alert](#)



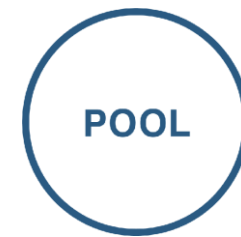
POOL ensures traceability by Integrating Data Collected From Each Stakeholder Involved in the Recycling Chain



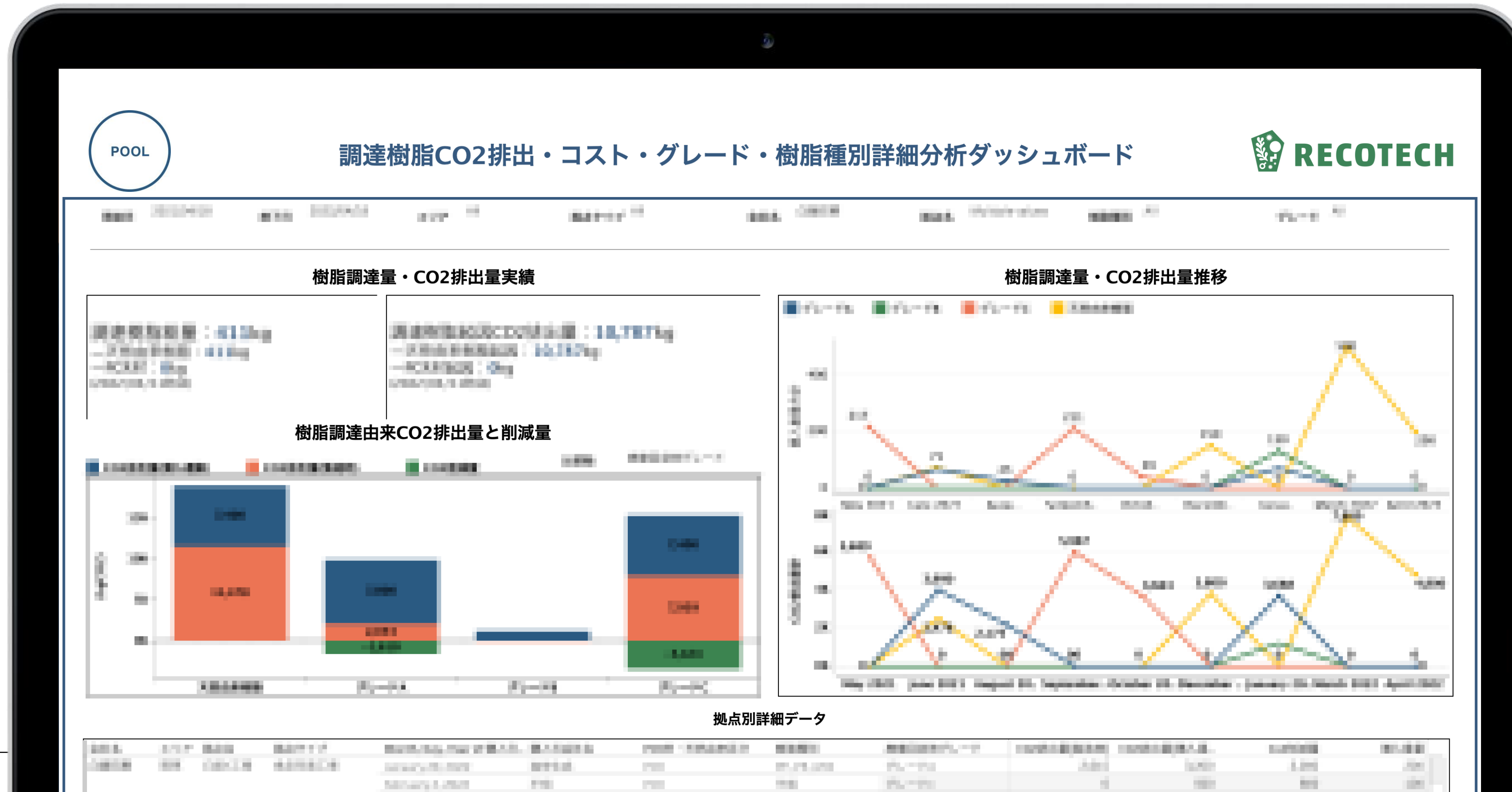
How it works

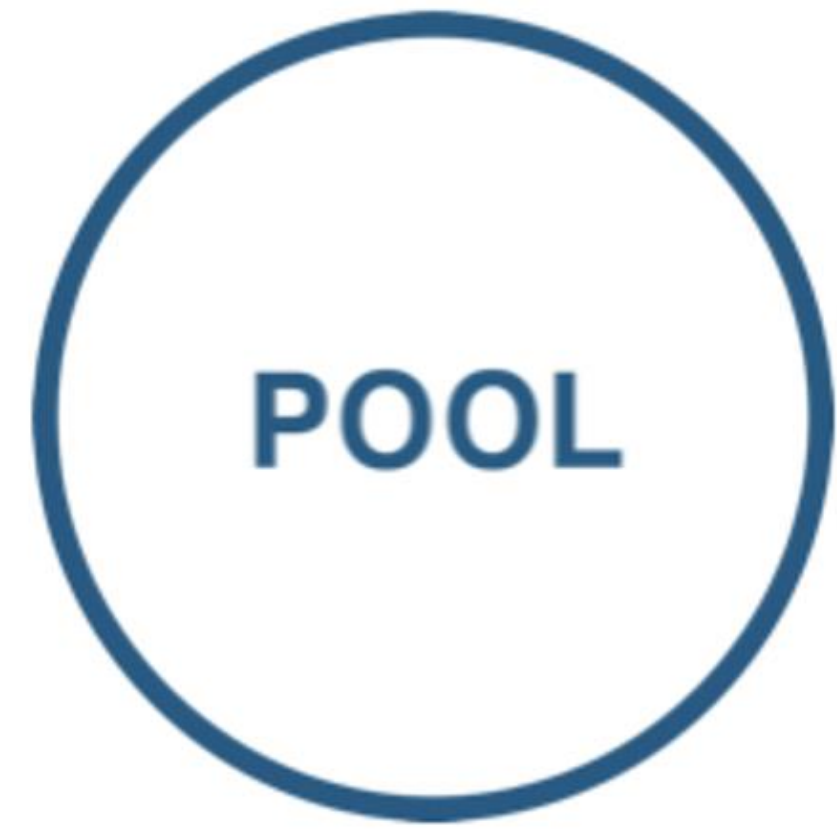


The final product's traced data can easily be managed and accessed on POOL while providing data on CO2 emissions



Deloitte.
デロイトトーマツ

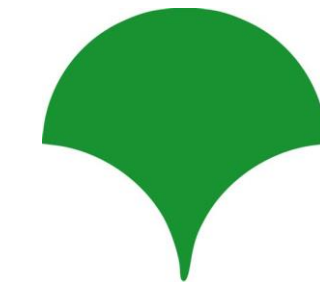




**POOL
PROJECT**

TOKYO

Project overview



Bureau of Environment
Tokyo Metropolitan Government

Test potential use of PCR materials
in manufacturers products

KAO TOPPAN

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

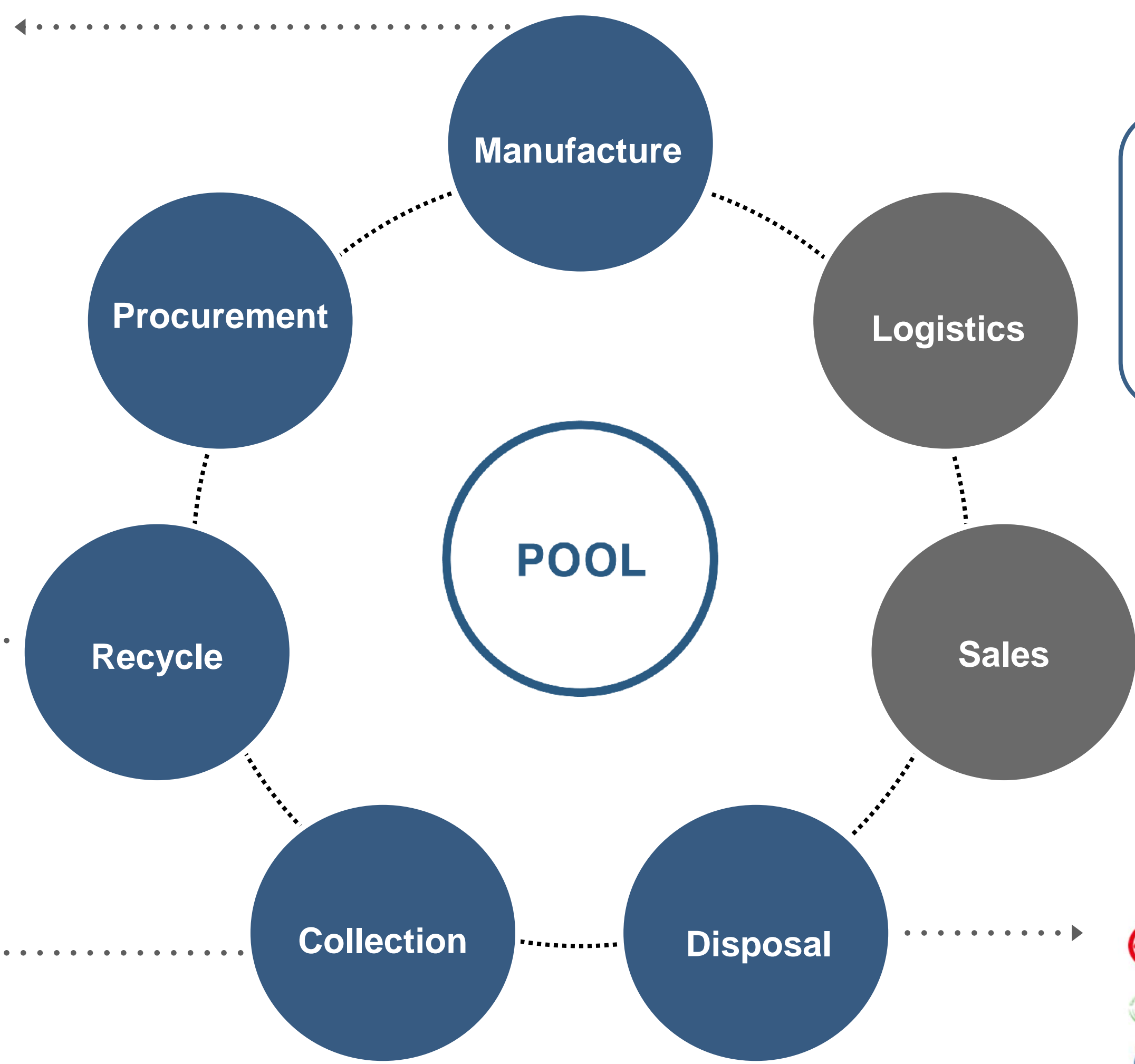
環境エネルギー株式会社

SUMITOMO CHEMICAL

Collecting waste plastic in vehicles
at the time of product delivery

SENKO

東京納品代行株式会社



Environmental impact and
cost assessment of
efficiency improved logistics

Deloitte. The University
of Tokyo
デロイト トーマツ (Prof. Murakami)

Sorting and disposal of waste
plastics from commercial facilities

三菱地所 ISETAN AEON MALL
 MITSUKOSHI DAIMARU
 東急不動産 Matsuzakaya SANYO
 SHEL'TTER ONWARD

KaO

1

Target material

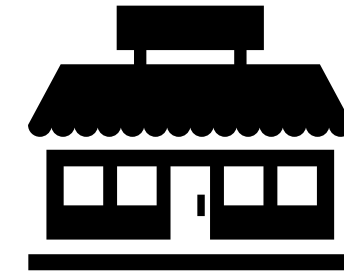




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2

Collection Target



3

Sort & register plastic





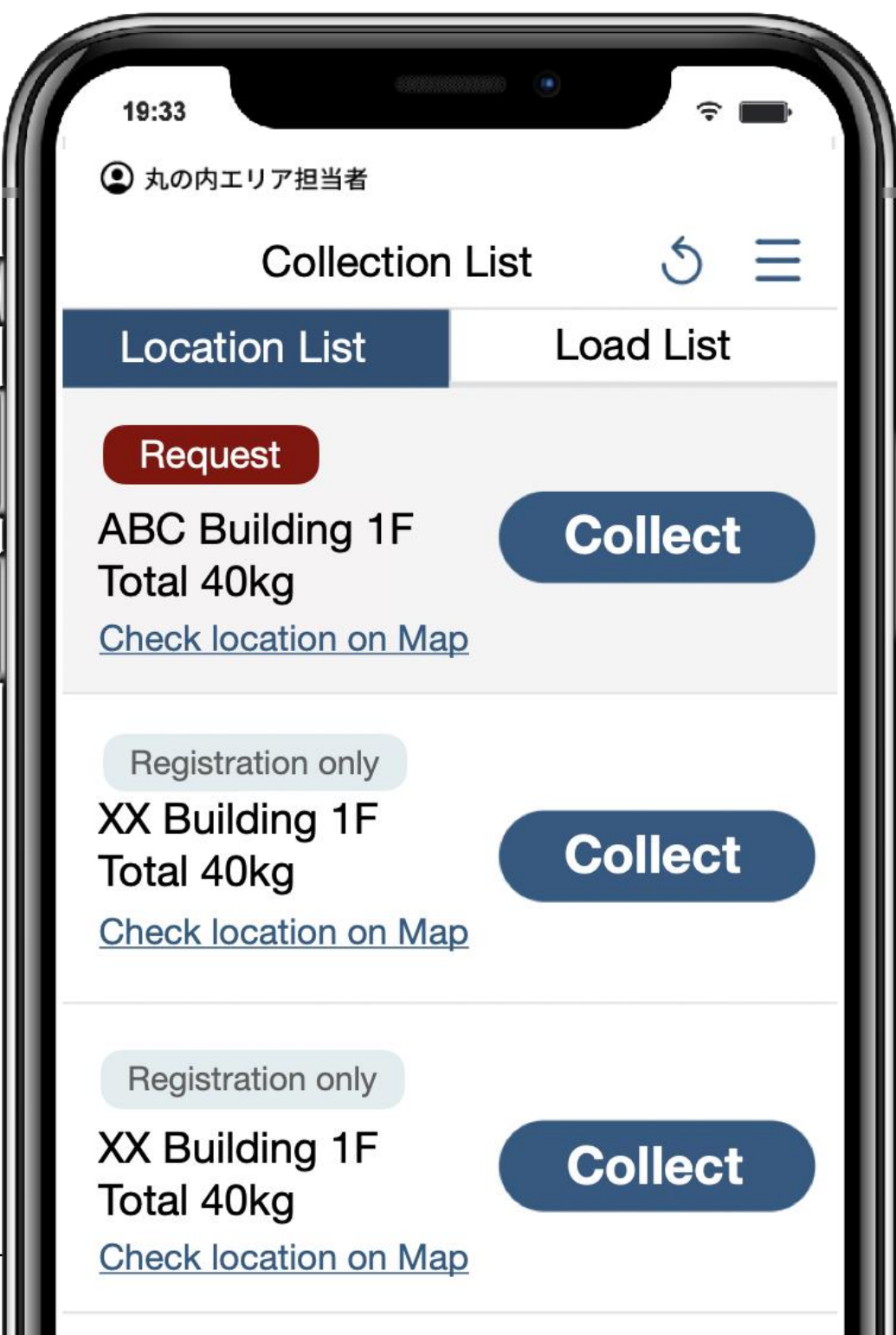
4

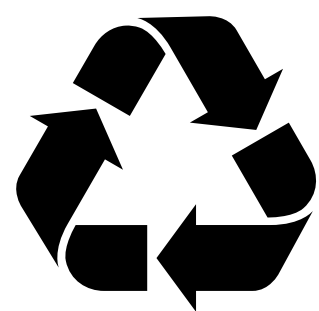
Check collection requests,
and input data



5

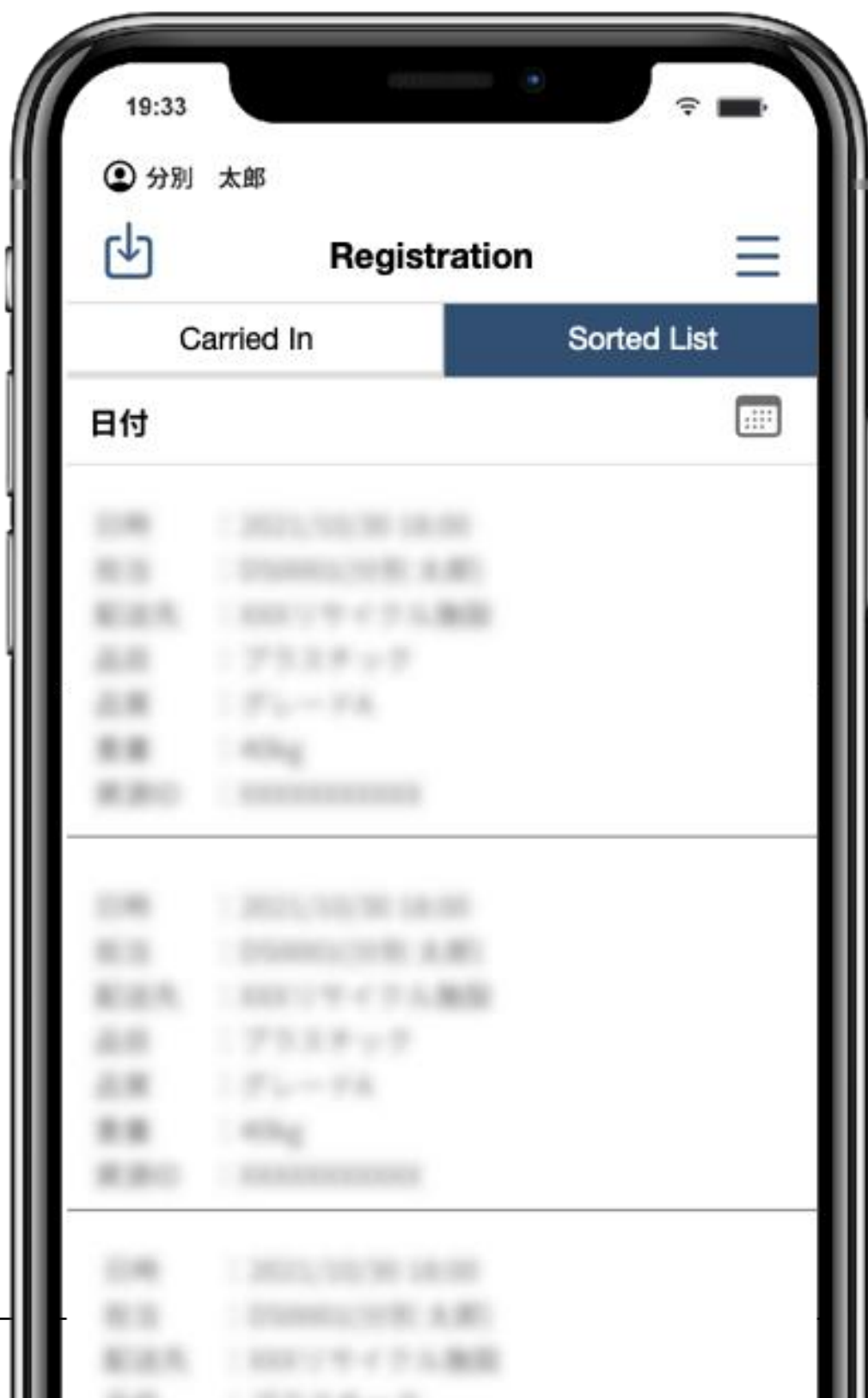
Compress, sort by grade
and input data





6

Recycle and input quality data



KaO TOPPAN

7

Procure PCR material



- Quality
- Cost
- Waste prediction
- Traceability
- CO2 emissions



Findings



- 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)

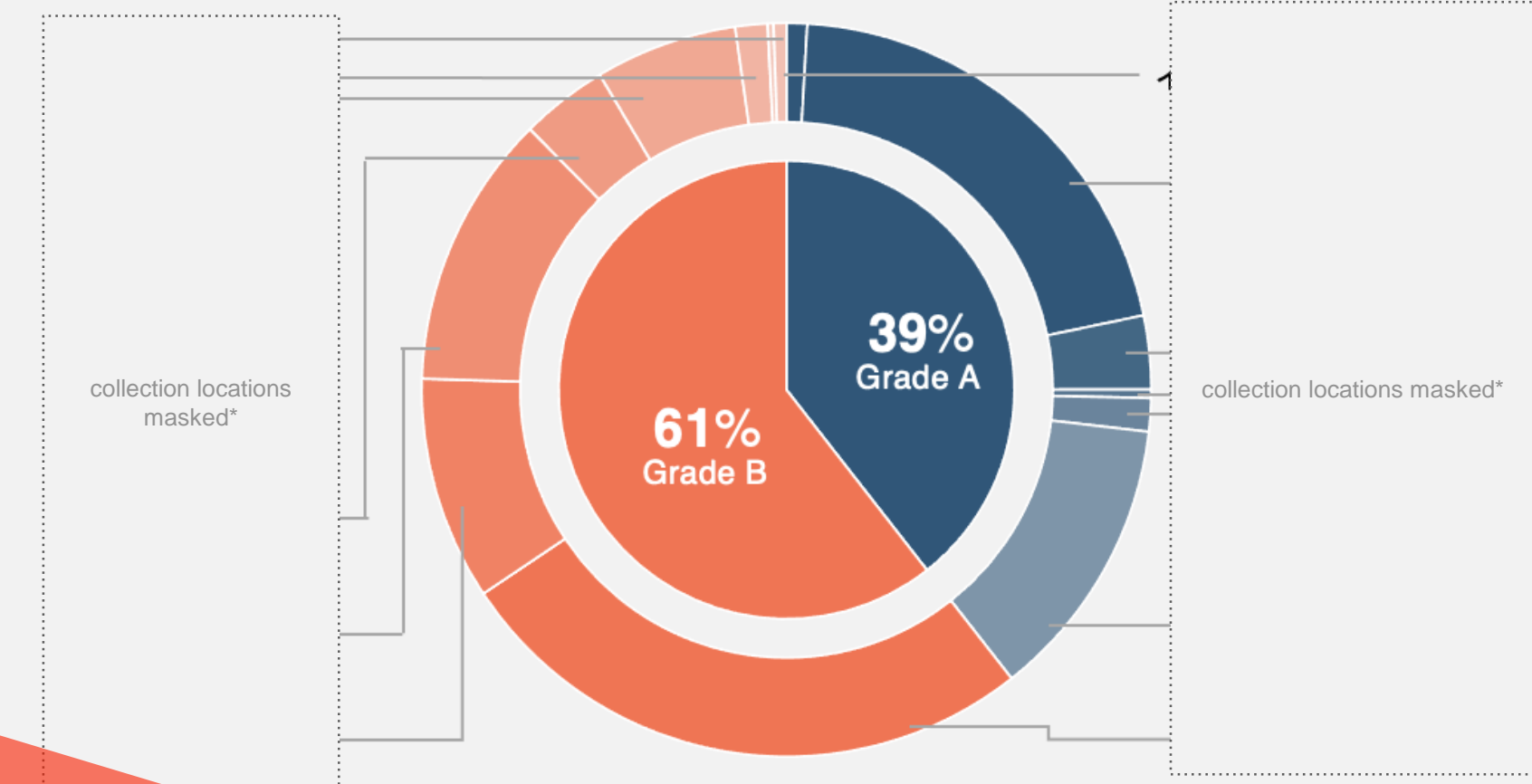
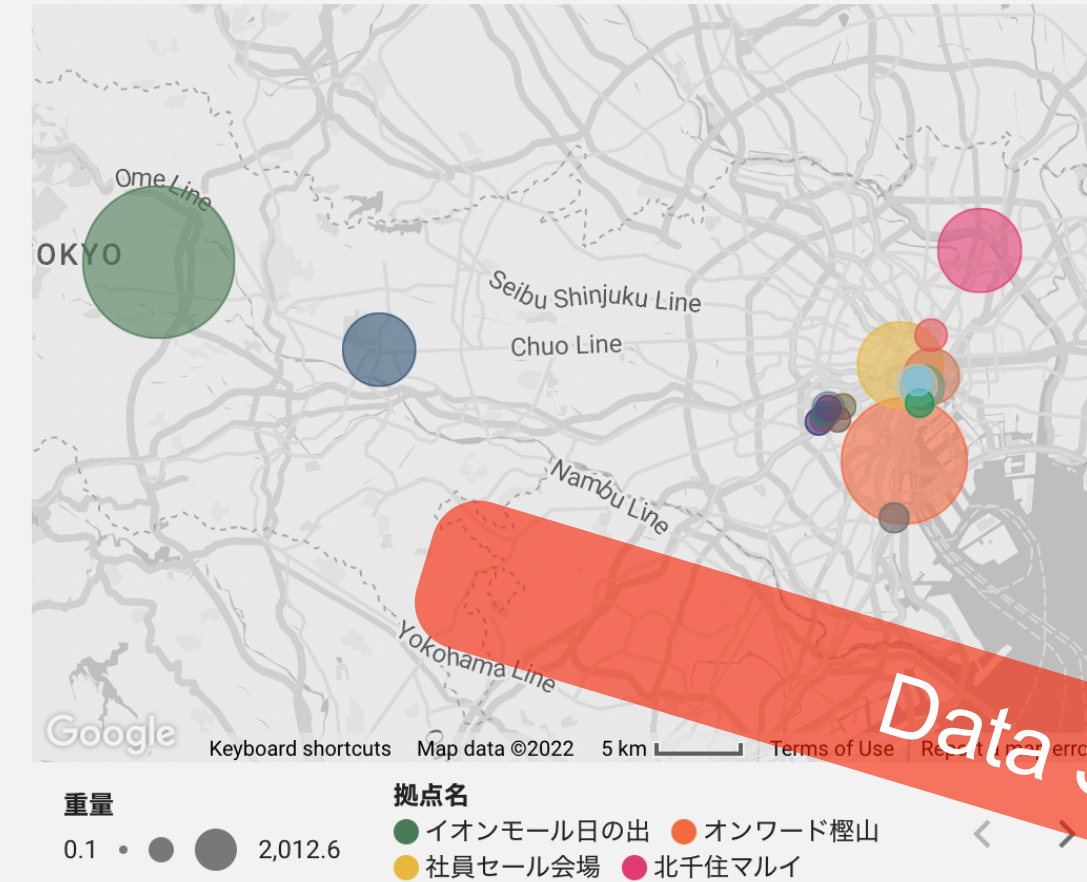
参加排出元の排出情報管理

各排出元の総排出量

拠点名	重量
1.	2,012.6
2.	1,600.1
3.	966.9
4.	929.3
5.	757.91
6.	483.9
7.	296.5
8.	249
9.	112.6
10.	109.45
11.	69.95
12.	43.6
13.	28.7
14.	19.86
Grand total	7,681.17

1 - 20 / 20 < >

排出拠点・排出量のマップ



累計排出量の推移

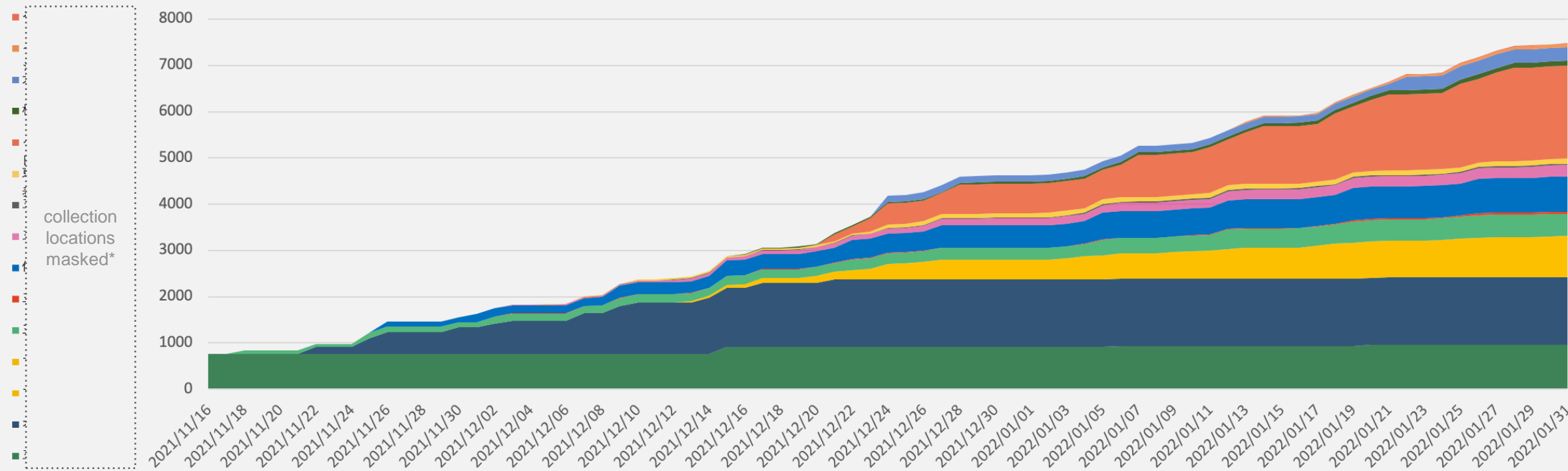
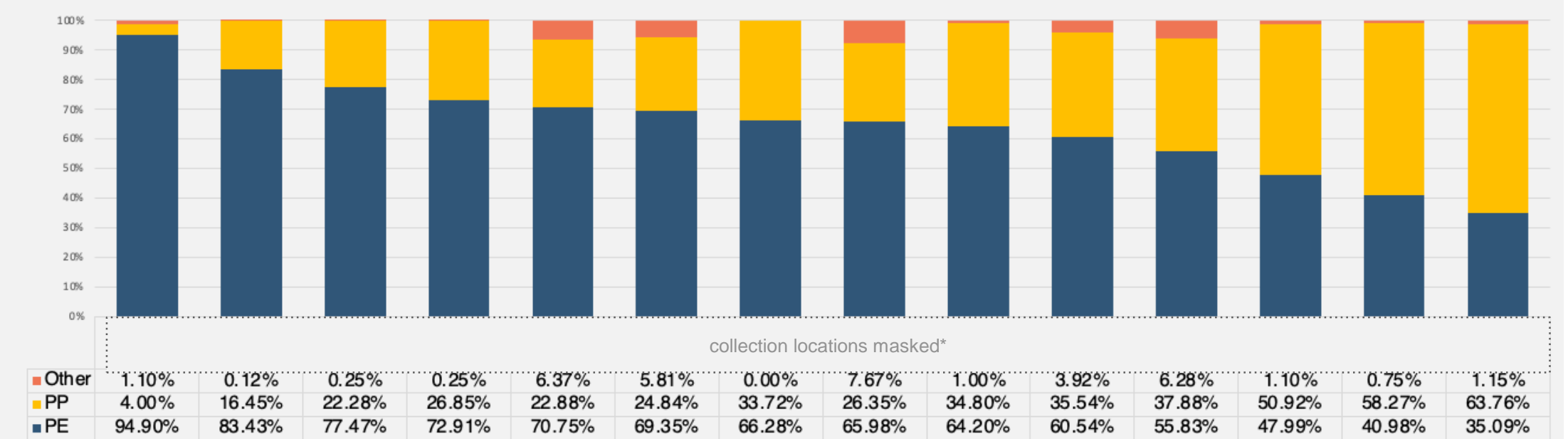
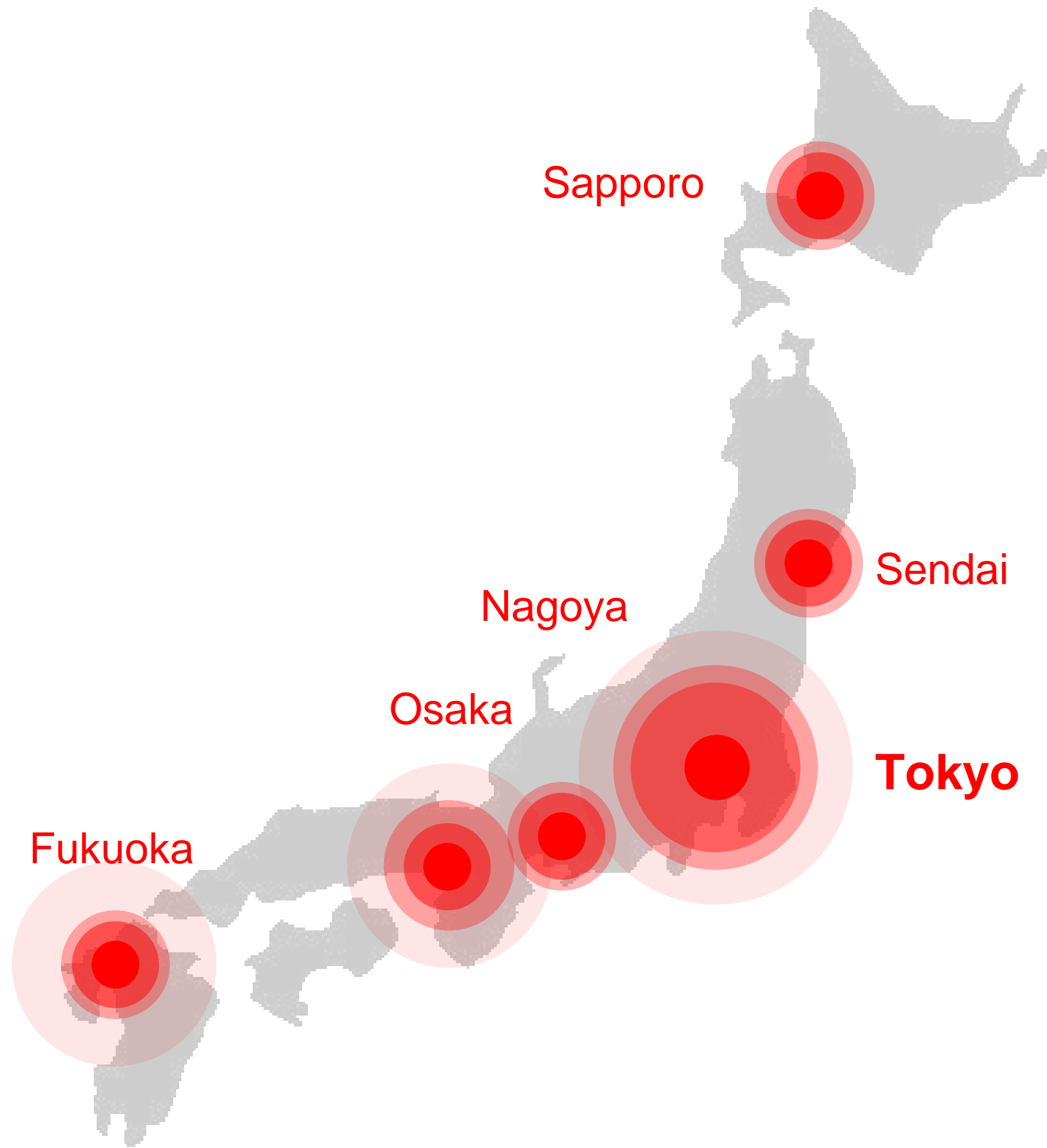


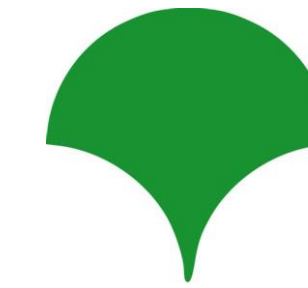
FIGURE 18

各排出元の組成割合から推定した回収量全体の組成割合と各排出元での組成のバラつき





**ALLIANCE
TO END
PLASTIC
WASTE** 



Bureau of Environment
Tokyo Metropolitan Government

- 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

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**



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Thank you for your attention.



Contact :

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For more information:

<https://recotech.co.jp/>