

Overseas Waste Management Business

—Appropriate Disposal of Medical Waste
in Southeast Asia—



Nishihara Corporation



Headquarters: Yahatanishi-ku, Kitakyushu City

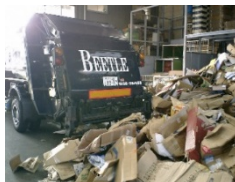
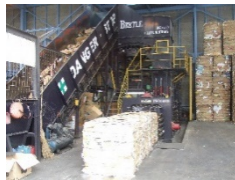
Plants: 6 plants in Fukuoka

Number of employees: 110

Capital: 500 million yen

The Company engages in the collection, transport and disposal of business waste as a licensed operator in Kitakyushu City.

In recent years it has developed its own waste management system and uses it to support waste generating businesses and waste disposal operators nationwide in conducting appropriate waste management in compliance with administrative rules.



1. Status of Waste Disposal in Developing Countries



2. Current Initiatives in Indonesia

(1) Urban-type recycling facilities



Unseparated household waste
⇒ Recycling

Waste reduced by 60%

(2) Urban-type composting facilities



Food waste
⇒ Materials for organic compost

Waste reduced by 80%

(3) Urban-type waste management complex



Household and business waste
⇒ Recycling

Aim to reduce waste by 60% or more

3. Medical Waste Disposal in Developing Countries



4. What Is Required and Current Challenges



What is required by governments in developing countries

Appropriate management and disposal of 5-15 tons of daily medical waste including infectious waste

- 1) Build a mechanism for collecting and transporting medical waste aimed at boosting the collection rate
- 2) Establish disposal facilities that ensure steady operation

Current Challenges

1) Build a mechanism for collecting and transporting medical waste aimed at boosting the collection rate
With the collection rate remaining low and fly-tipping common, there are concerns that medical waste including infectious waste will have negative effects on not only the global environment but also on citizens. Although local laws and regulations require manifests to be prepared, **there is no method of tracking and managing** all the waste generated by medical activities. Accordingly, despite the existence of governing rules, it is extremely difficult to assess the current status of medical waste management.

⇒ **Beetle Eye system**

2) Establish disposal facilities that ensure steady operation

The steady operation of incineration processes at disposal facilities **largely depends on the type of materials received. However, neither the government nor the private sector has enough relevant experience.** Accordingly, there are unrealistic laws and operating regulations, which sometimes hinder construction/operation of disposal facilities, cause unusually long maintenance periods, and make the steady operation of incinerators difficult.

⇒ **Urban-type medium scale incinerator**

5. Beetle Eye Approach to Challenge 1



Waste management video tracking linked to paper and electronic manifest information

Prevent fraud with the help of electronic eye-tracking!!

Waste information management service
bee-net system

Tracker application



Loading



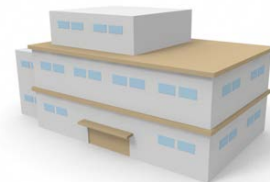
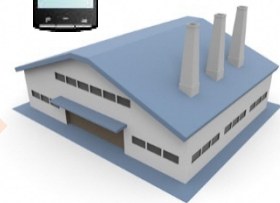
Unloading



After disposal



Transport waste to disposal site after loading



Manufacturer

Waste hauler

Waste disposal operator

GPS



5. Beetle Eye Approach to Challenge 1



bee-net system

こんにちは

設定 ログアウト

Main menu

- Manifest management
- Commissioned information management
- Quantity management
- Charge management
- Report management
- Business operator information

2016年1月
日 月 火 水 木 金 土
3 4 5 6 7 8 9
10 11 12 13 14 15 16
17 18 19 20 21 22 23
24 25 26 27 28 29 30
31

Beetle Eye

Details of disposal	Collection and transport route (GPS)
Date: 2016.01.20	
Waste generating site: Sendai Plant	
Type of waste for disposal: <input type="radio"/> Deep-fried skewers	
Weight: 1500	
Issued number: 12345678910	
Hauler: <input type="radio"/> Environment	
Disposal operator: <input type="checkbox"/> Development	

(1) Loading at a waste generation site

(2) Unloading at a disposal site

(3) Disposal completion at a disposal site

印刷

報告書

Time-based authentication

- Real-time
- Fraud prevention
- Shooting location authentication
- GPS tracking

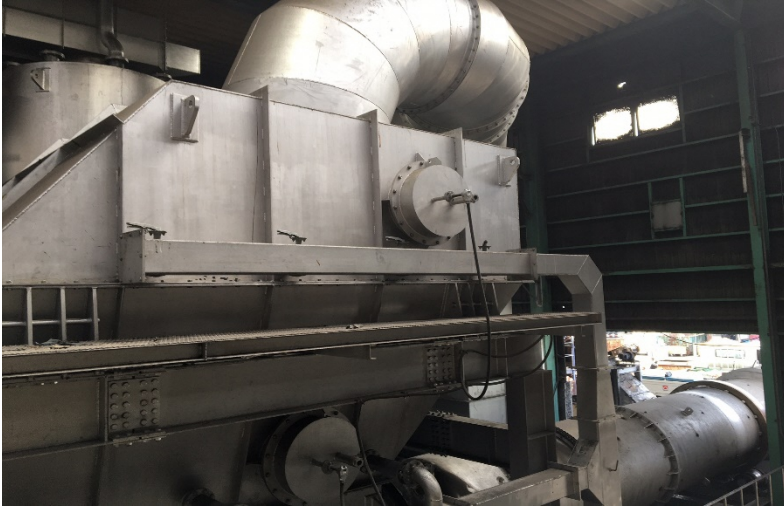
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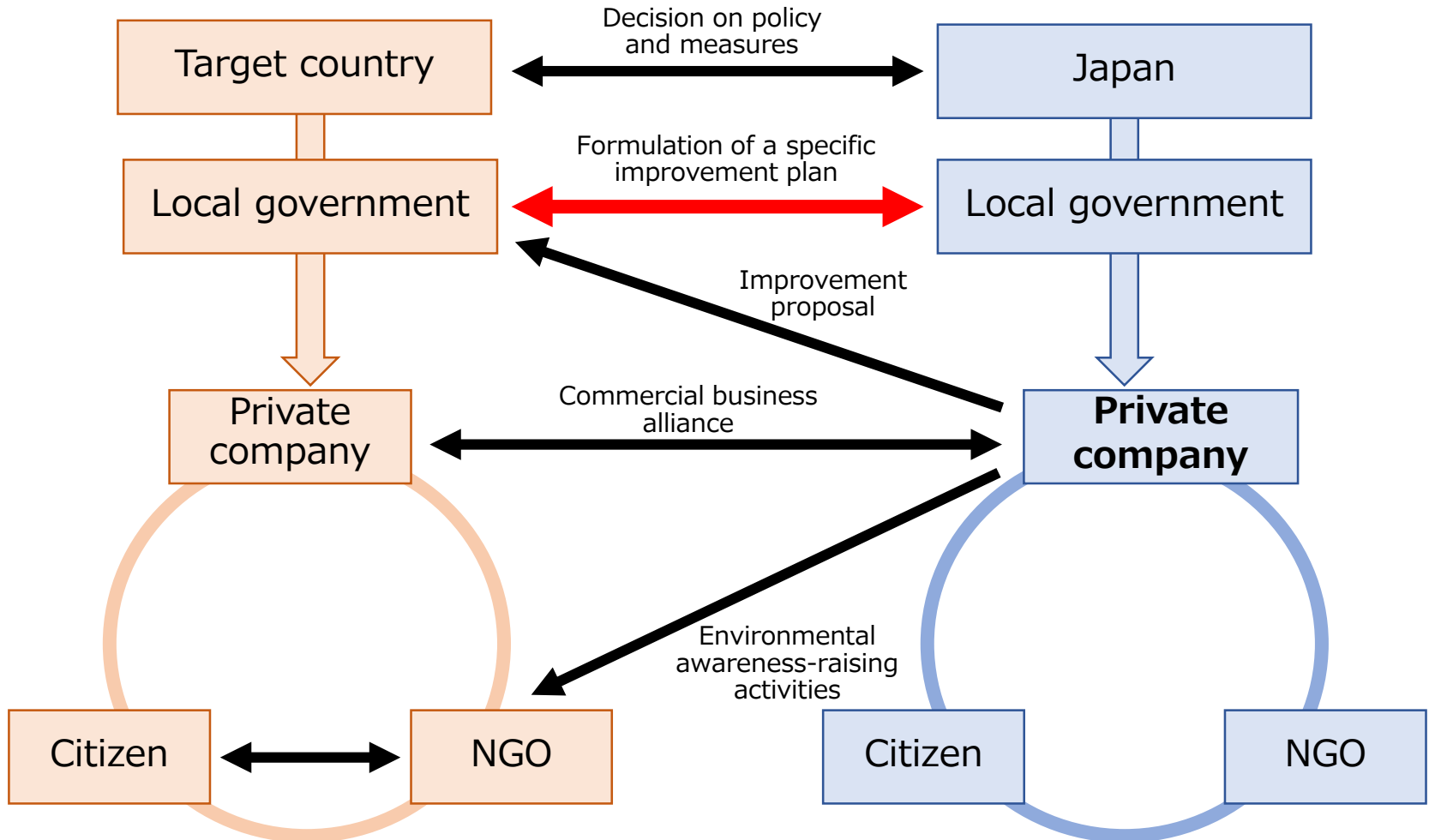
6. Urban-Type Medium Scale Incinerator Approach to Challenge 2



6. Urban-Type Medium Scale Incinerator Approach to Challenge 2



7. Collaboration between the Target Country, Local Governments and Citizens



Thank You for Your Attention

