

“Sustainable” Waste Water Treatment

Presented by
EBARA Engineering Service (EES)



1. Company Introduction

The 2nd JAEFF 2011



History of EES

- 1912 Founded by Issei HATAKEYAMA
- 1920 EBARA Corporation was established
- 1956 EBARA-INFILCO was established with INFILCO Inc(USA)
- 1994 EBARA-INFILCO became 100% subsidiary of EBARA Corporation
- 2009 All EBARA's water related business unit integrated to Ebara Engineering Service (EES)
- 2010 Mitsubishi and JGC joined EES

What is EES?

Since 1st April 2010, trinity operation started based on EES



1/3

1/3

1/3



EBARA ENGINEERING SERVICE CO., LTD.
(**EES**)



EBARA ENGINEERING SERVICE CO., LTD.

Coming soon ~ Swing Corporation ~

Sustainable Water + ing



Swing Corporation

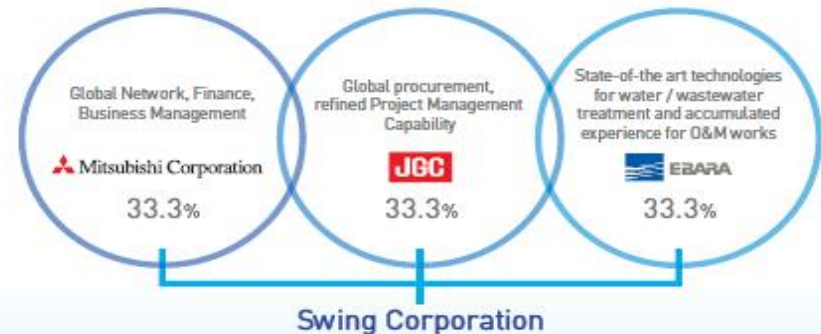
Our logo **水ing** is made up of the Japanese character for water 水 (pronounced sui in Japanese) and **ing** from English (an indicator of the progressive tense).

Swing Corporation Takes Off!

A major player in the Japanese water industry offering comprehensive services and technologies has a new name from April 1, 2011.

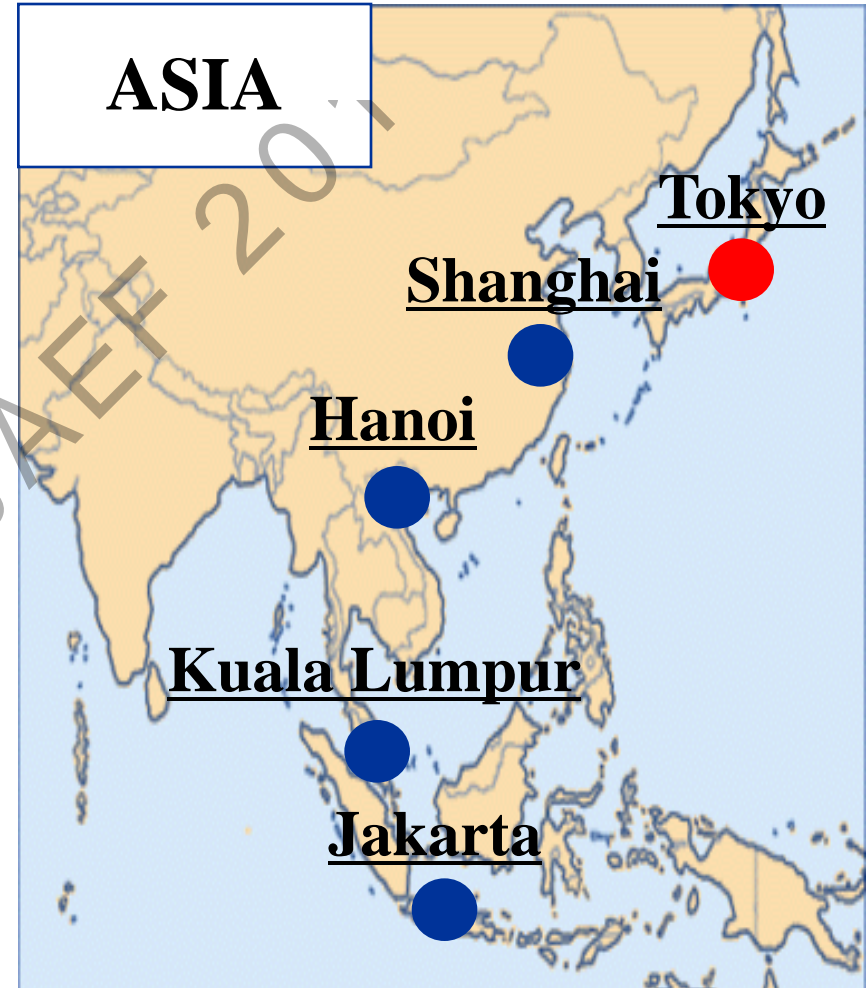
We are proud of our leading-edge water and environmental technologies, developed in Japan over the years. Under our motto "Produce, Refine and Manage water", we aim to combine diverse technologies with one-of-a-kind service to provide complete water support.

Combined expertise of three leading Japanese companies.



We bring the world wealth and future health by offering comprehensive solutions to match customer needs, from engineering to water business management. We aim at further expansion in the global water business market.

Network



JAEF 2017



Business Field



Water Treatment



Waste Water Treatment

Industrial Water Treatment

Total Water Solution

Sludge Treatment

Leachate Treatment

Septic Treatment



Biomass

Chemical

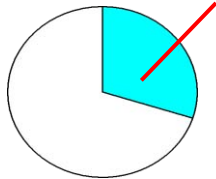


Experience in Japan

EPC Business for public sector

Domestic Market
Share : 30%

No.1 share in Japan



O&M Business for public sector

for WTP

62 plants
currently
under operation

for WWTP

186 plants
currently
under operation

1. Skilled Operators and Engineers

- (1) Operator: **over 2,000**
- (2) Process/Construction Engineer: **500**

2. Abundant experience in EPC and O&M

- (1) Accumulated know-how and network
- (2) Well developed emergency operation (flood, earthquake)



Experience in Asia



WTP & WWTP in Kazakhstan
(100,000 m³/d & 135,000 m³/d)



WWTP in China
(260,000 m³/d)



WWTP in Singapore
(75,000 m³/d)



WWTP in Malaysia
(59,000 m³/d)



WTP in East Timor
(5,200 m³/d)



WTP in Sri Lanka
(5,000 m³/d)



Experience in the world

EBARA's Track Records of Water Treatment



“Sustainable”

**EBARA Waste Water Treatment
Technologies**

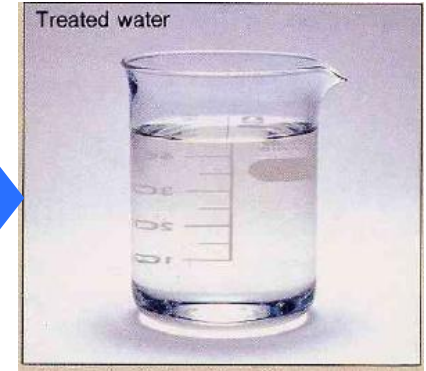
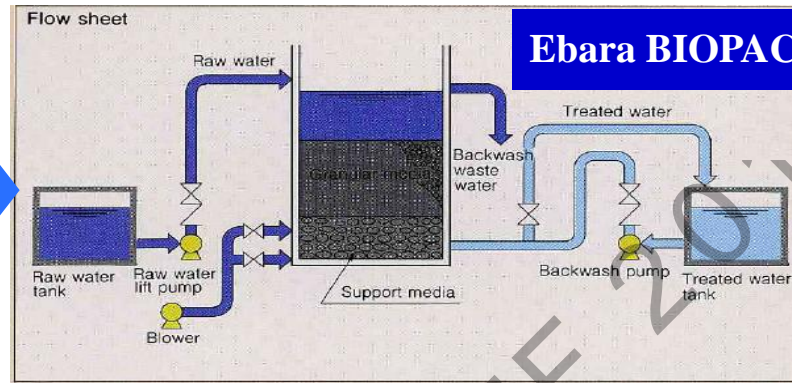
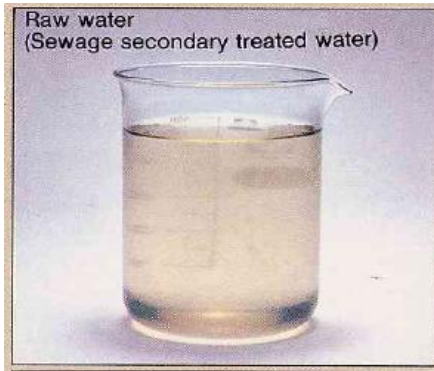


(1) EBARA BIOPAC

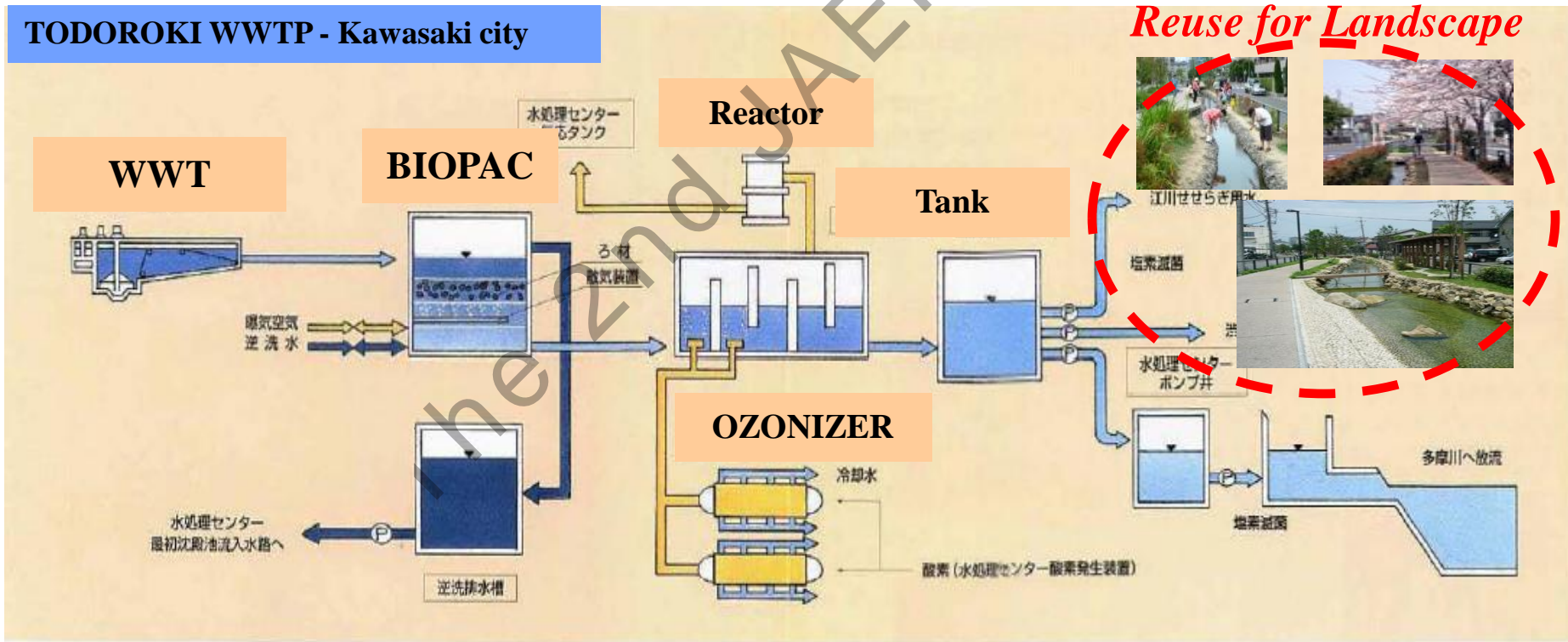
~ “*Sustainable*” Waste Water Treatment Technology ~

The 2nd JAEF 2011

Water Reuse for Municipal Waste Water



TODOROKI WWTP - Kawasaki city



Water Reuse for Commercial Building

Roppongi Hills

Treated Water ; 1,050m³/d



Yebisu Garden Place

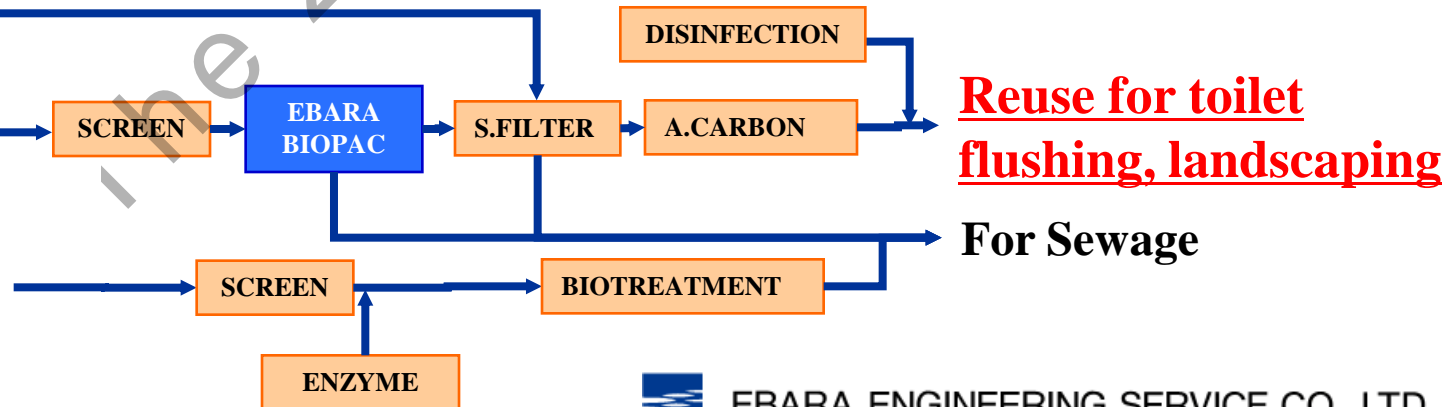
Treated Water ; 1,051m³/d



DRAIN

Waste Water
from others

Waste Water
from Kitchen



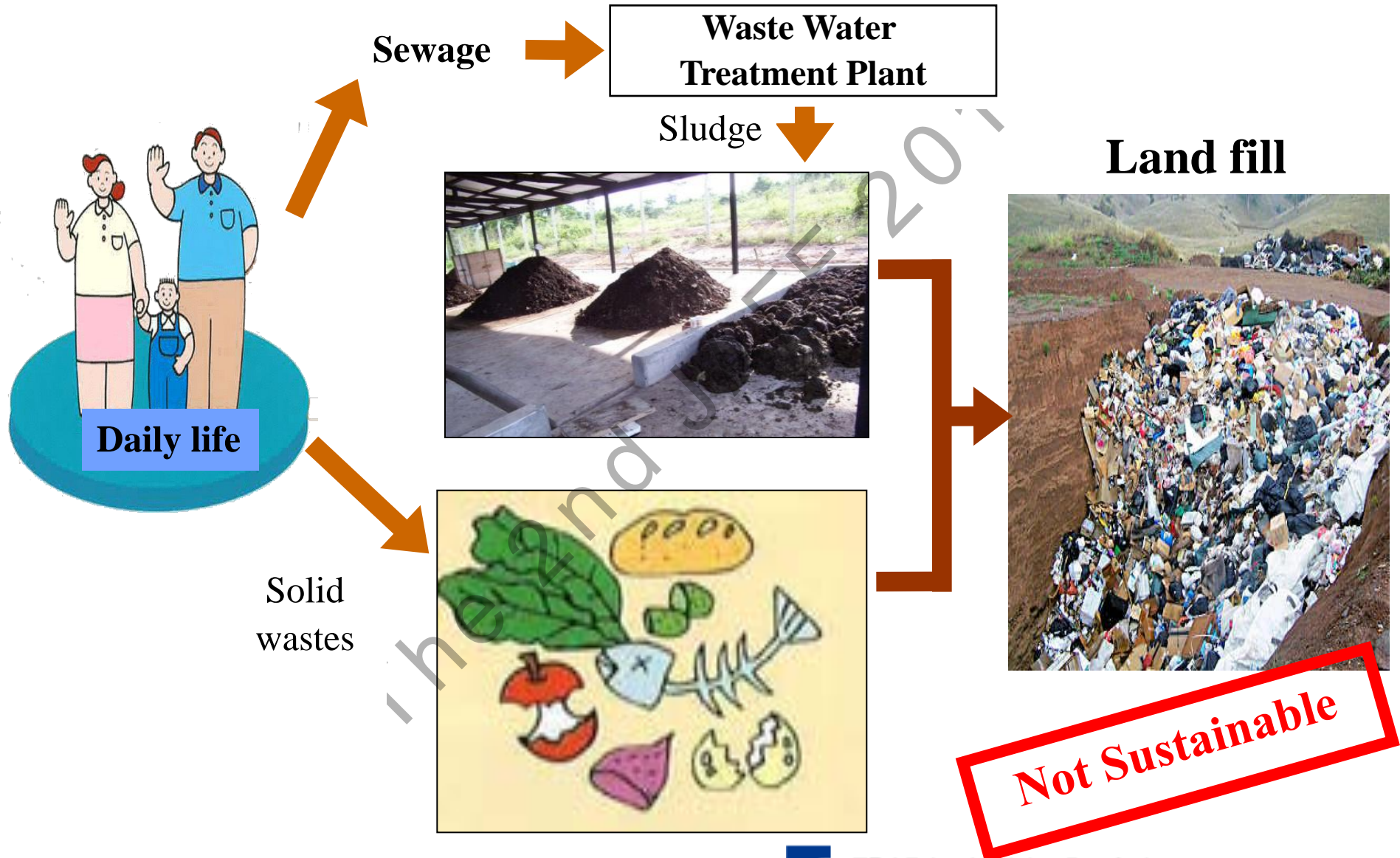
EBARA ENGINEERING SERVICE CO., LTD.

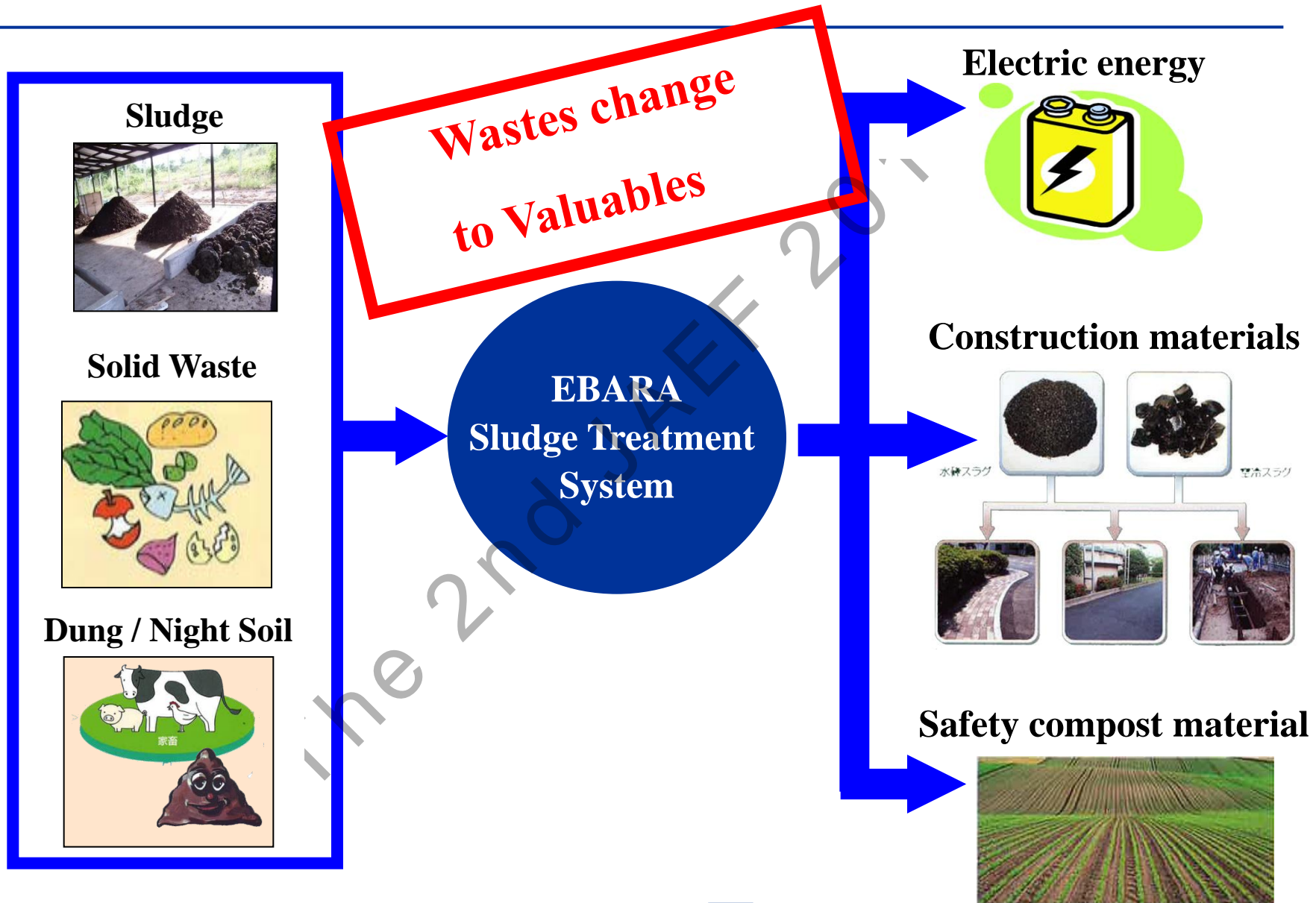
(2) EBARA Sludge Treatment System

~ “*Sustainable*” Sludge Treatment Technology ~

The 2nd JAEF 2011

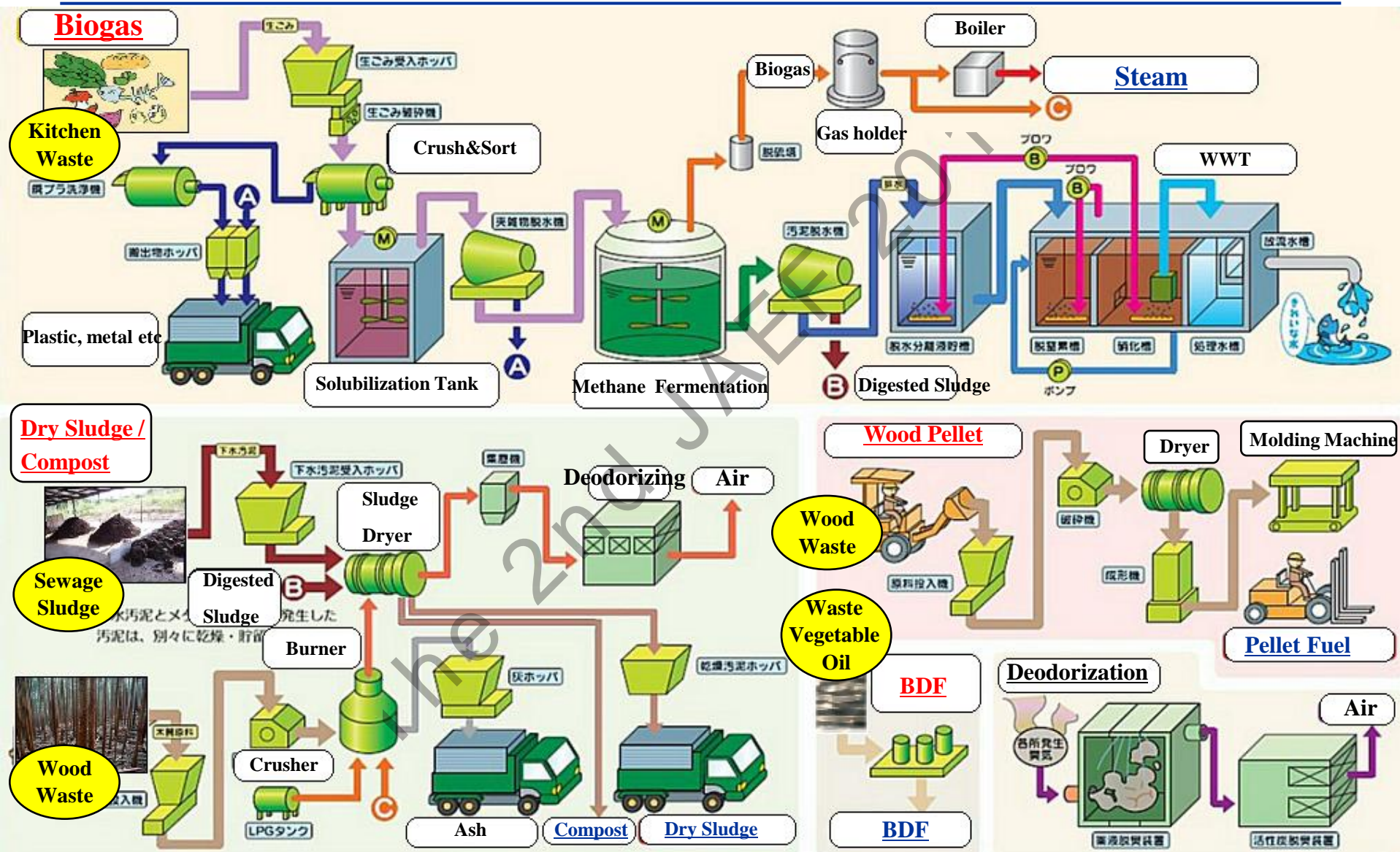
Now landfill disposal but . . .





EBARA Sludge Treatment System

Plant Process Flow

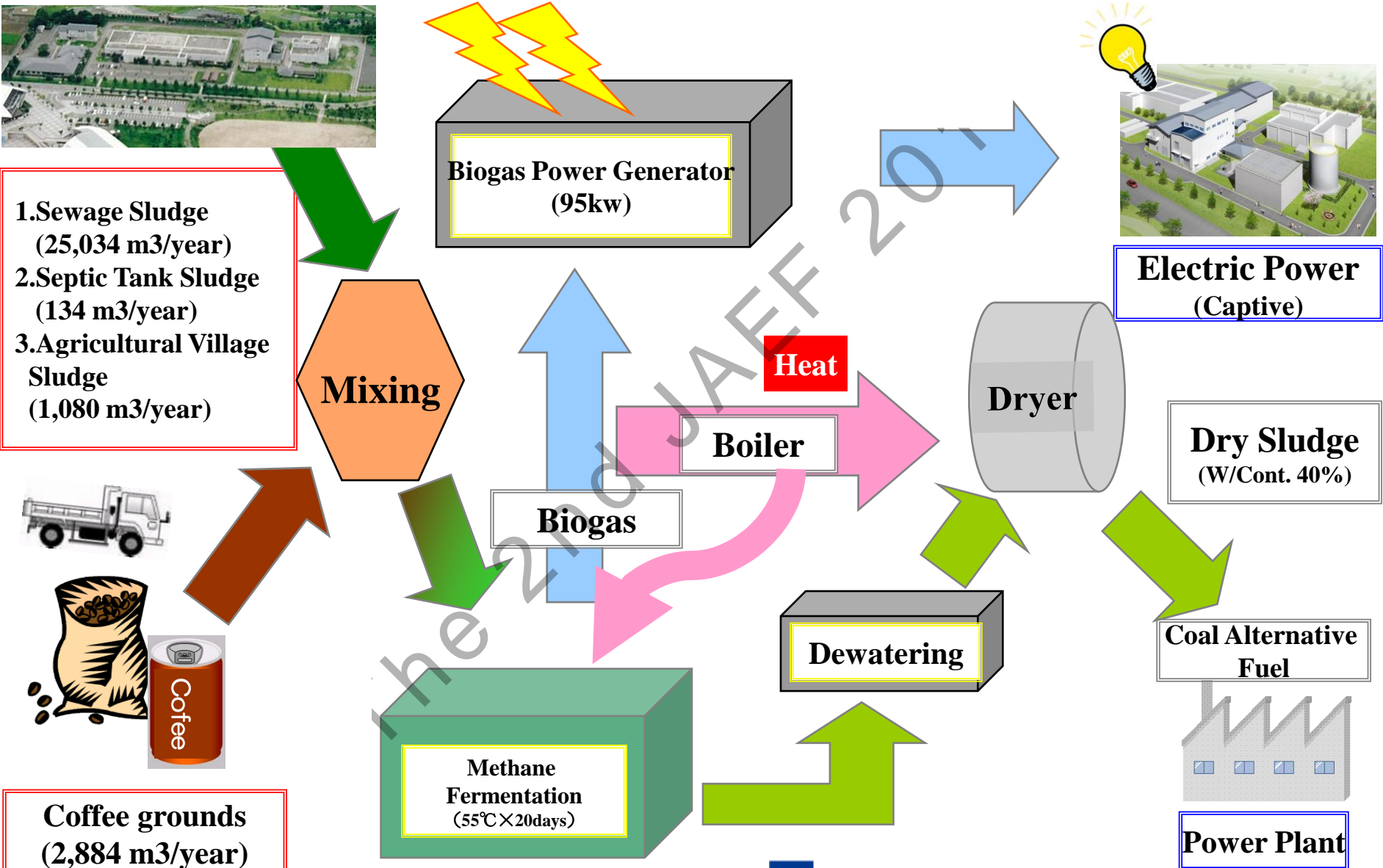


Wastes To Energy

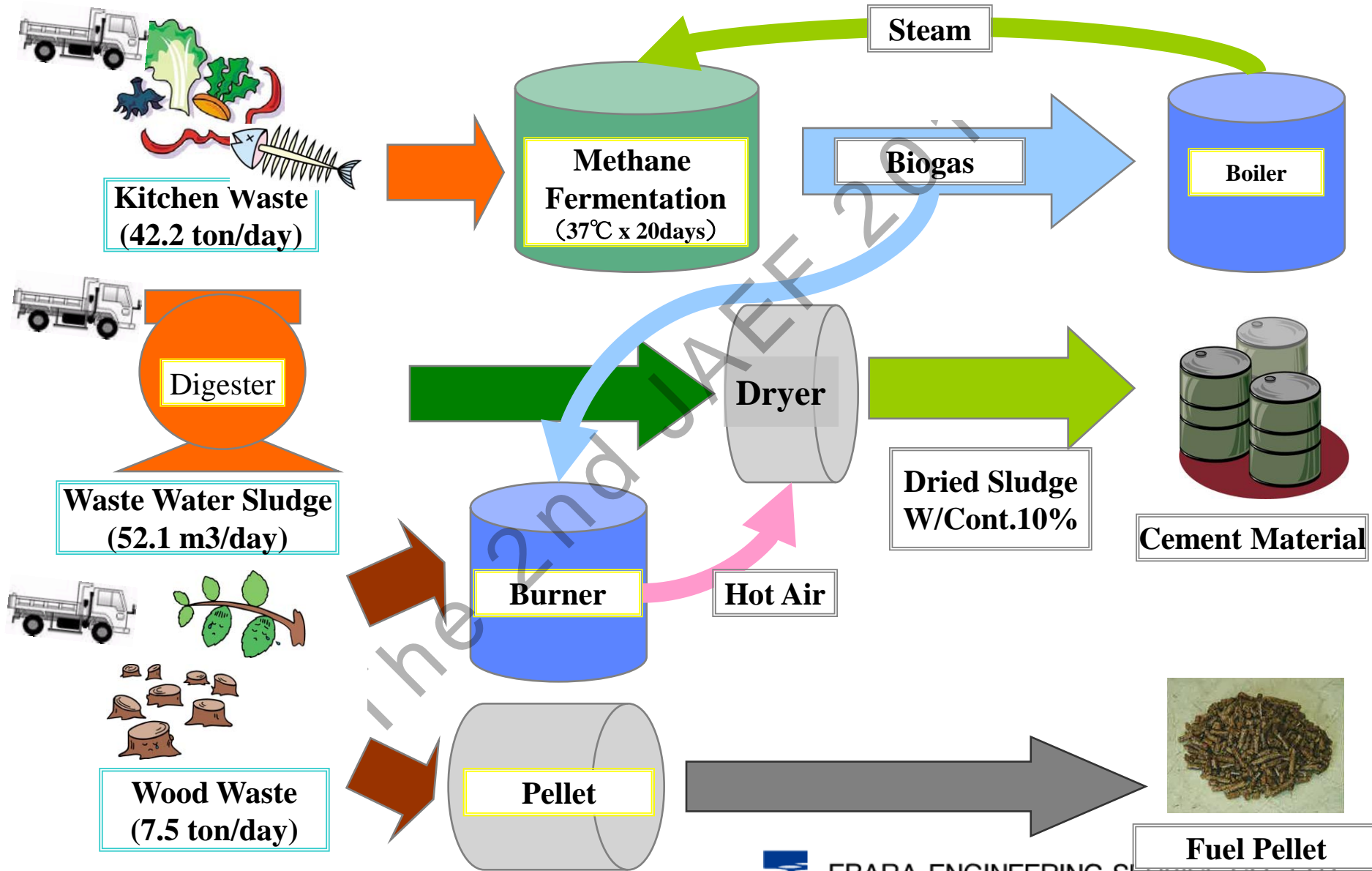
Methane Gas Generated

	Emissions [/ day]	Dry solid [%]	Gas generated [m ³ (NTP) / t]	Methane generated [m ³ (NTP) / t]	Methane generated [10 ³ KCAL / t]
Domestic kitchen wastes	200 g/person	20.0	110	66	564
Kitchen wastes (business)	—	20.0	123	74	633
Human excreta	2.0~2.6 L/person	1.4	4.4	2.6	22
Sludge of household wastewater treatment tank	—	0.8	2.5	1.5	13
Sewage sludge	3.3kg/person	3.0	10.5	6.3	54
Cow's waste	60 kg/head	8.0	17.5	11.4	97
Pig's waste	5.7 kg/head	9.0	28.9	18.8	161
Coffee grounds	—	30.0	184	110	941
Green tea leaves	—	24.0	84	50	428
Clear liquor lees	—	8.5	52	31.2	267

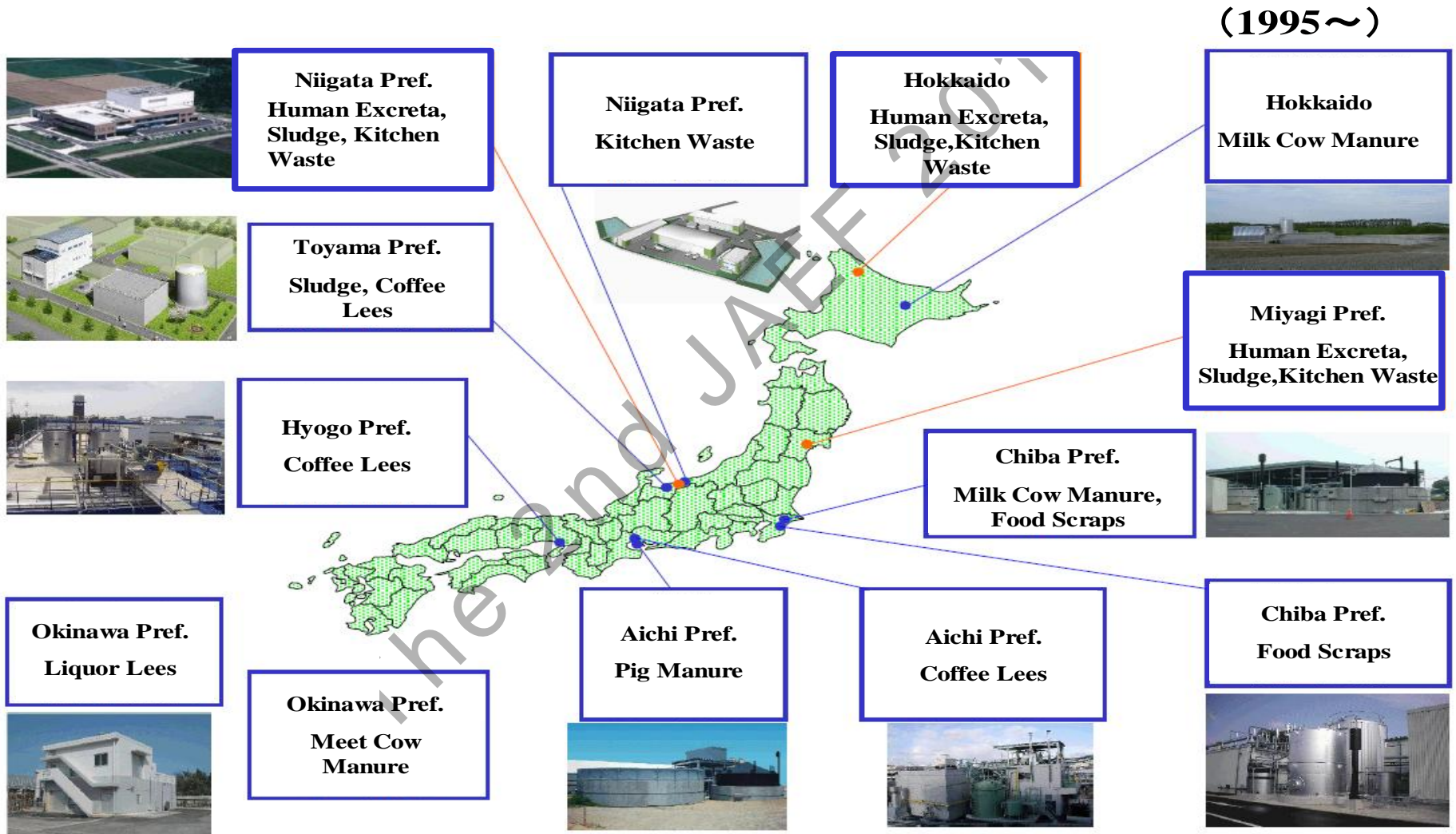
Biogas Plant in KUROBE City



Biogas Plant in JYOETSU City



Track Record for Methane Fermentation Plant



EBARA COMPOST (Sendai City , Japan)

Sendai City Environmental Bureau

Sludge 

Kitchen Waste 

Disposed Bushes 



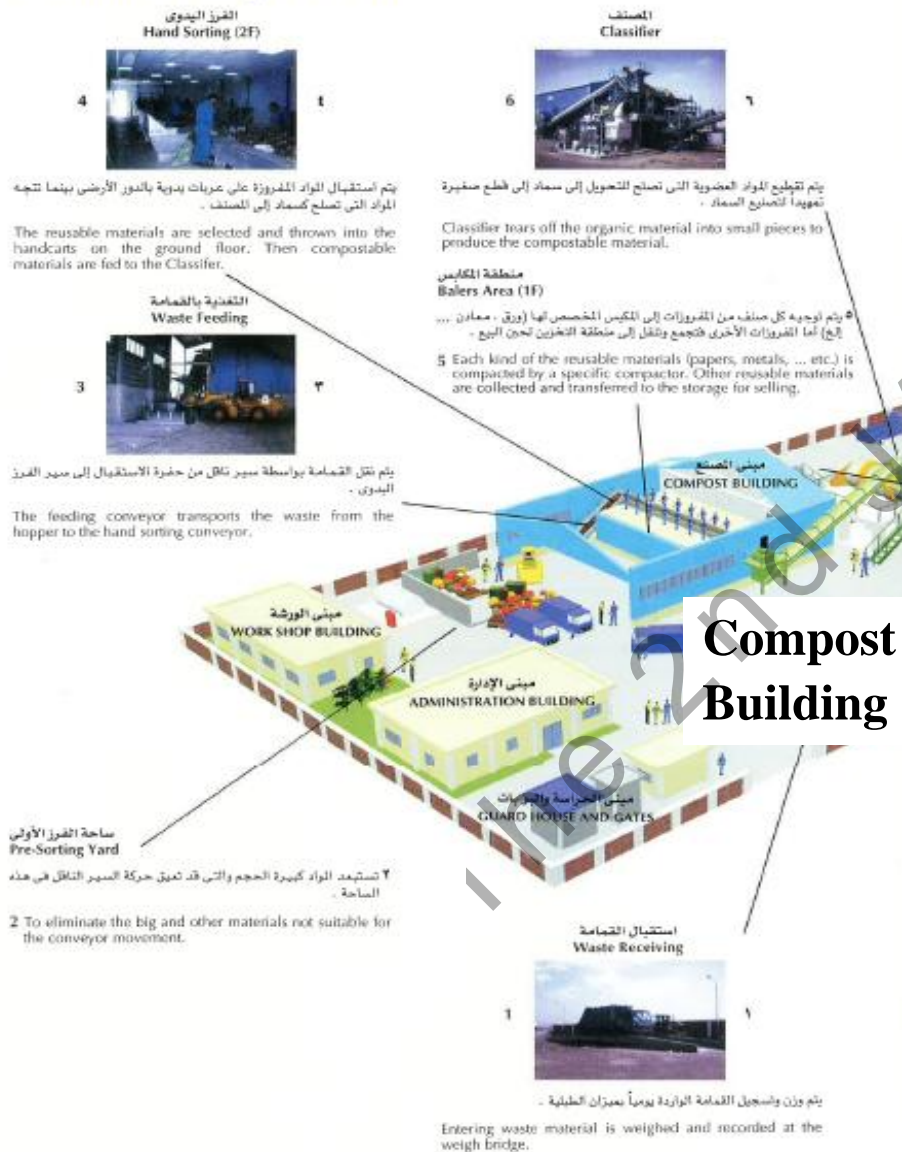
Treatment Capacity :
30ton/day



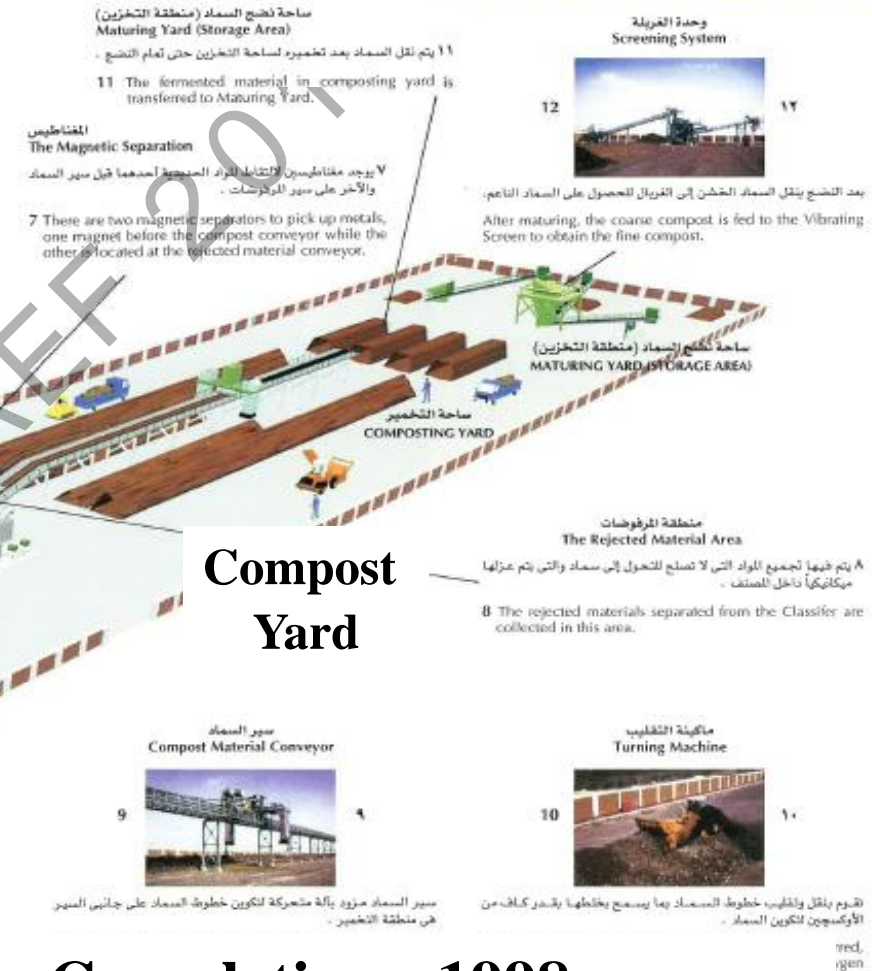
Compost Production:
2-3ton/day



Alexandria Compost Plant



مصنع الإسكندرية للسماد العضوي



Compost Yard

Completion ; 1998
Capacity : 150ton/day

EBARA Leachate Treatment (Tokyo , Japan)



Leachate Treatment in Central
Breakwater Landfill Site
(20,500 m³/d)



EBARA

(SWING Corporation)

To

*provide best “sustainable” solution
based on advanced key technologies*

