

Hitachi Zosen Corporation Waste to Energy Introduction

23 October 2018

第11回アジア3R自治体間ネットワーク会合
「循環経済推進に向けての取り組み紹介」

Introduction for circular economy promotion

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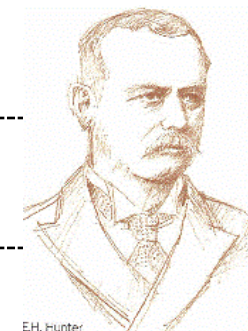
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Company Profile Overview

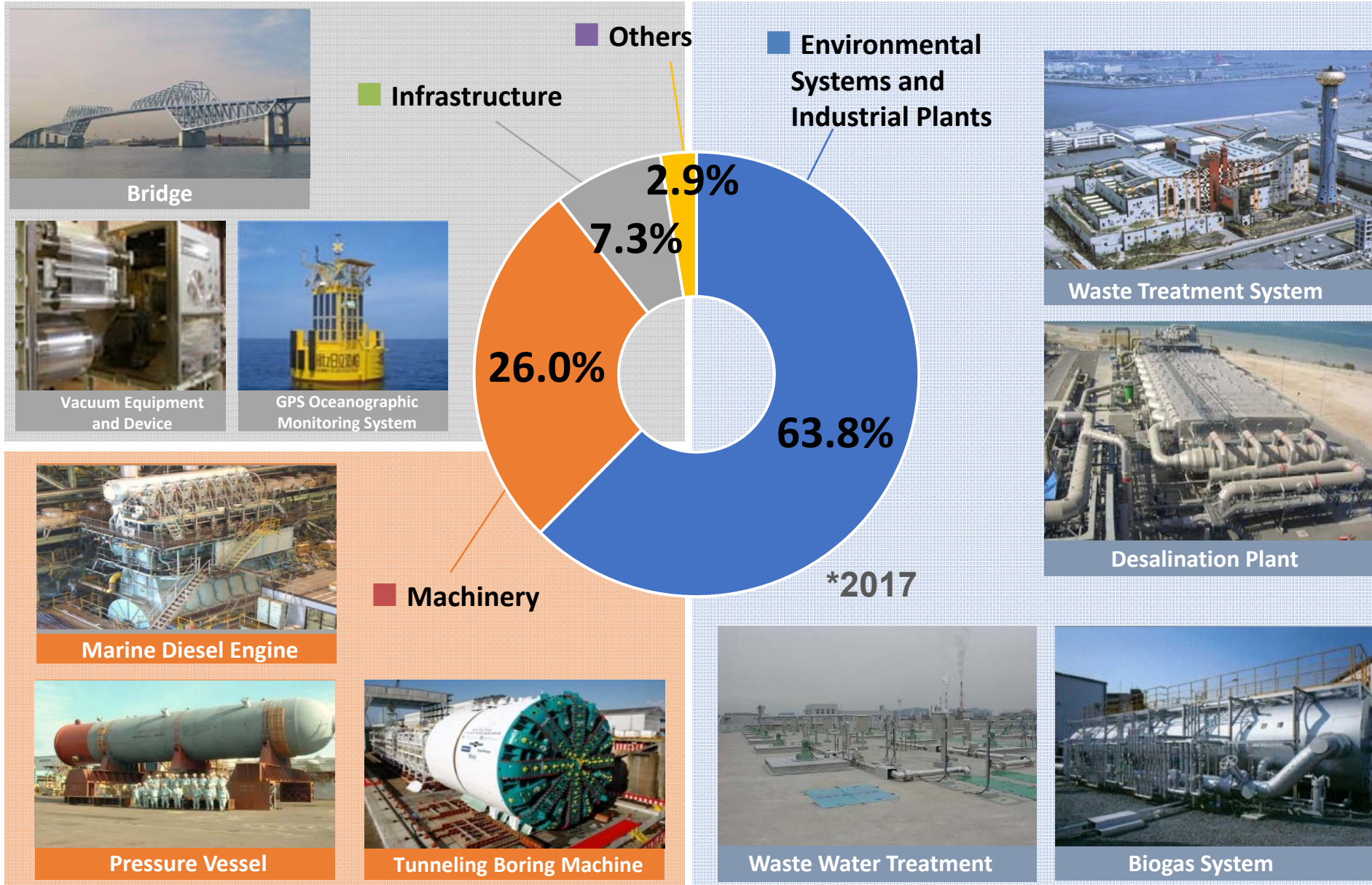
Company Name	HITACHI ZOSEN CORPORATION (Hitz)
Founded	1881 by E. H. Hunter (from UK)
Incorporated	1934
Headquarters	Osaka and Tokyo, Japan
Employee*	10,370
Paid-in Capital*	45.4 billion yen (≒415 million US\$)
Net Sales*	376 billion yen (≒3,438 million US\$)
Net Income*	2.1 billion yen (≒19 million US\$)



1 JPY = 0.009 US\$

*(As of March 31, 2018)

Sales Structure by Product



Impact of Direct Landfill



A huge fire of discarded waste on May 28, 2017, produced hazardous air pollutants and spent fruitless time and money.

(discarded waste size; 20,000 m³)

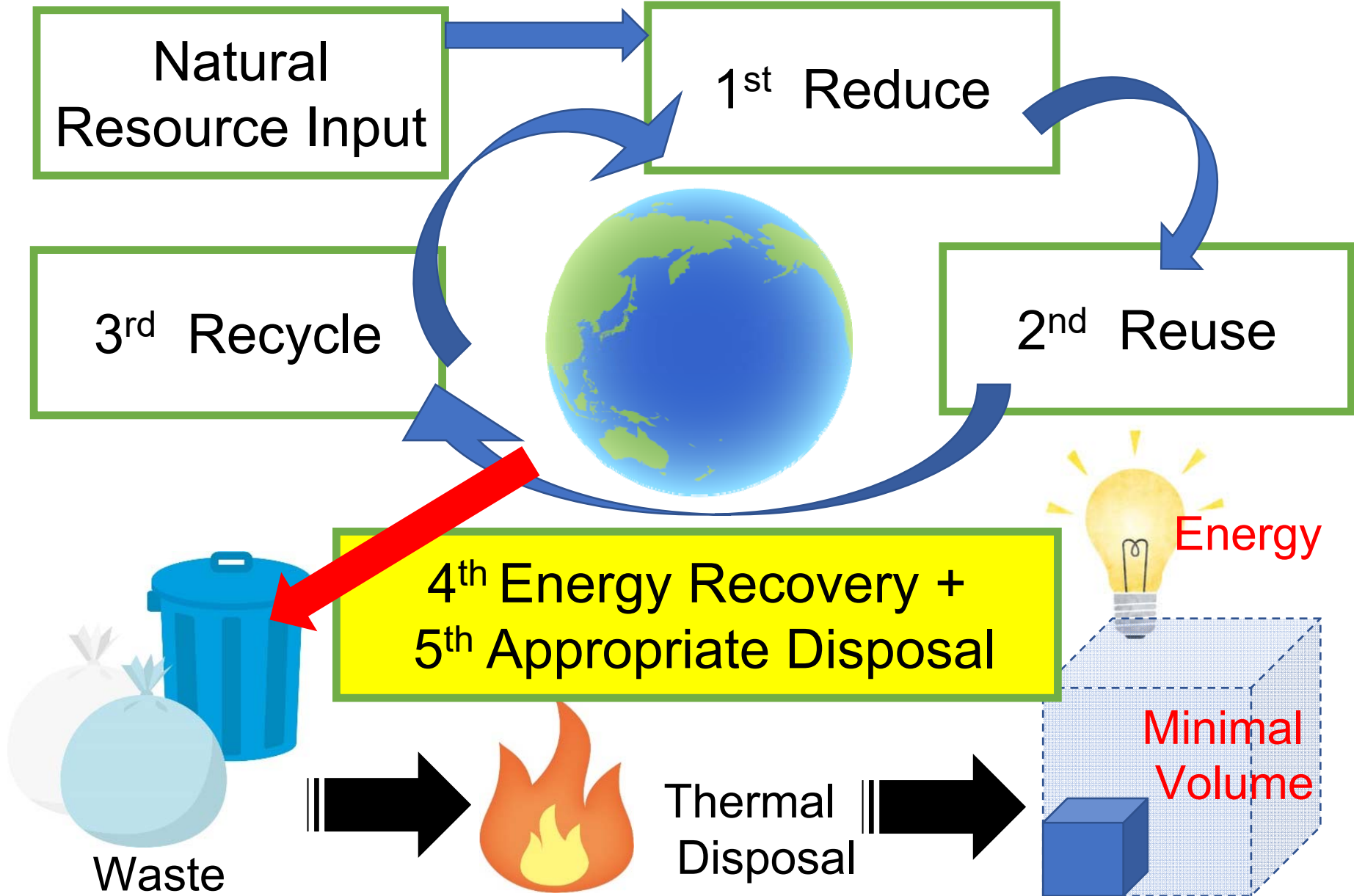
Source: Asahi news paper



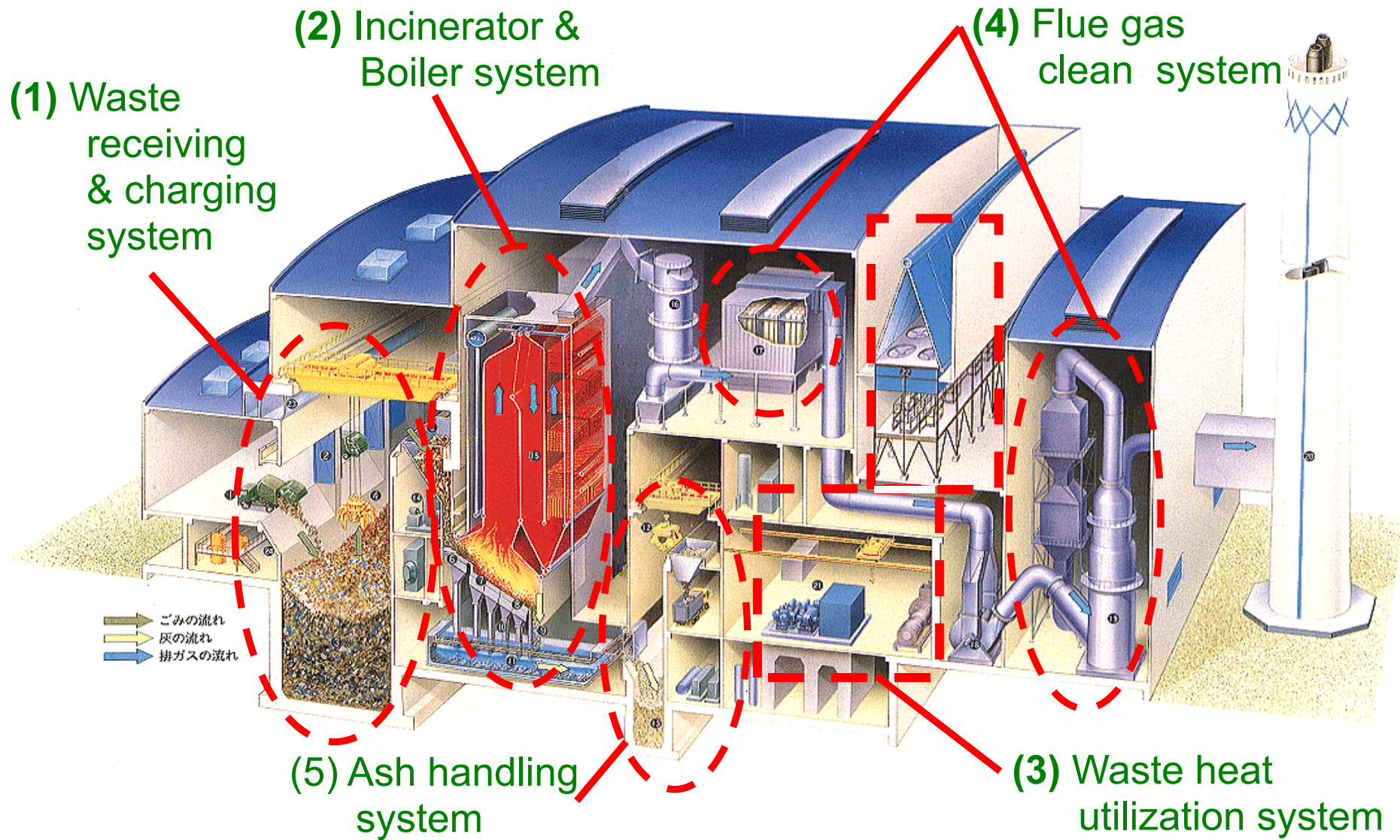
A landslide of waste on July 10, 2000, killed 218 people living on the dumpsite and caused 300 missing persons. (height 30m, width 100m)

The number is far greater and much closer to 1,000.

Source: JICA(photo by ICAN(アジア日本相互交流センター))



Overview image of WtE plant



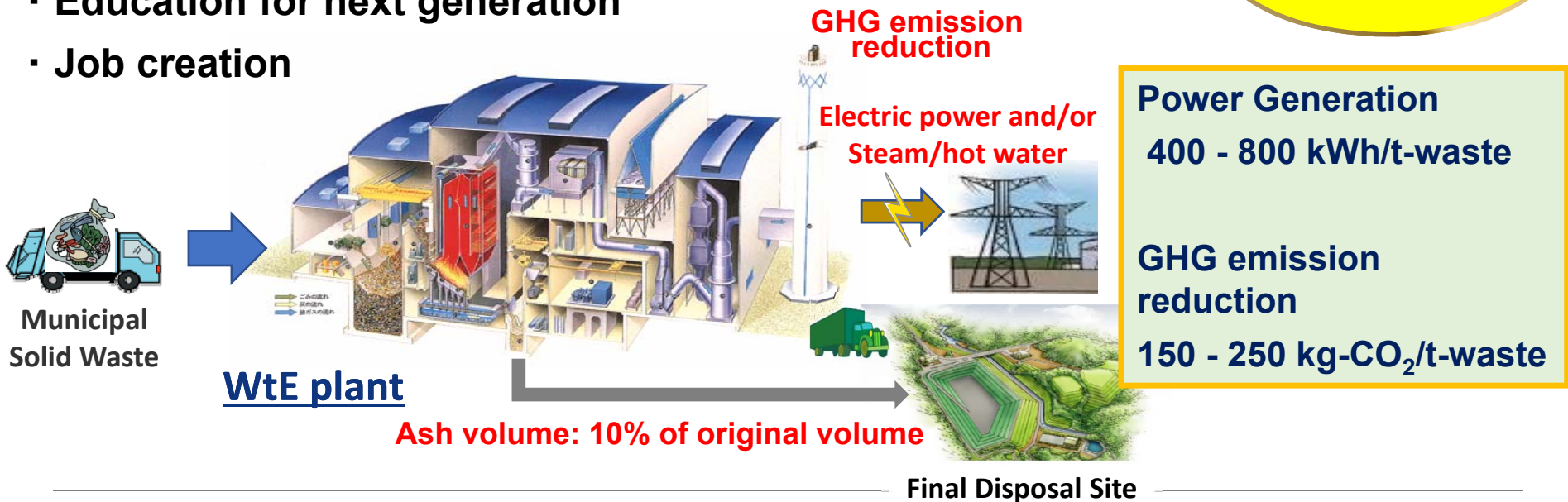
Advantages of Waste to Energy

- Sanitary waste treatment
 - ➔ Improvement of residential environment & Health
- Quick treatment of large quantity of waste
- Good adaptability for treatment of various wastes
- Volume reduction of Waste
 - ➔ Landfill life-extension
- Heat utilization & Power generation from waste energy
- Greenhouse gas emission reduction
- Education for next generation
- Job creation

Reduce of Environmental impacts

Effective Utilization of Unused Energy

Improvement of Living Standard



What is WTM system? ⇒ Biomass Plant

WTM system
(Water-needless Two-phase Methanation)

WTM system is the unique biogas production system for recycling of food and kitchen waste.

Wet type

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Mesophilic



Akita Biogas Power Station(50 tons/day)

【Feature】

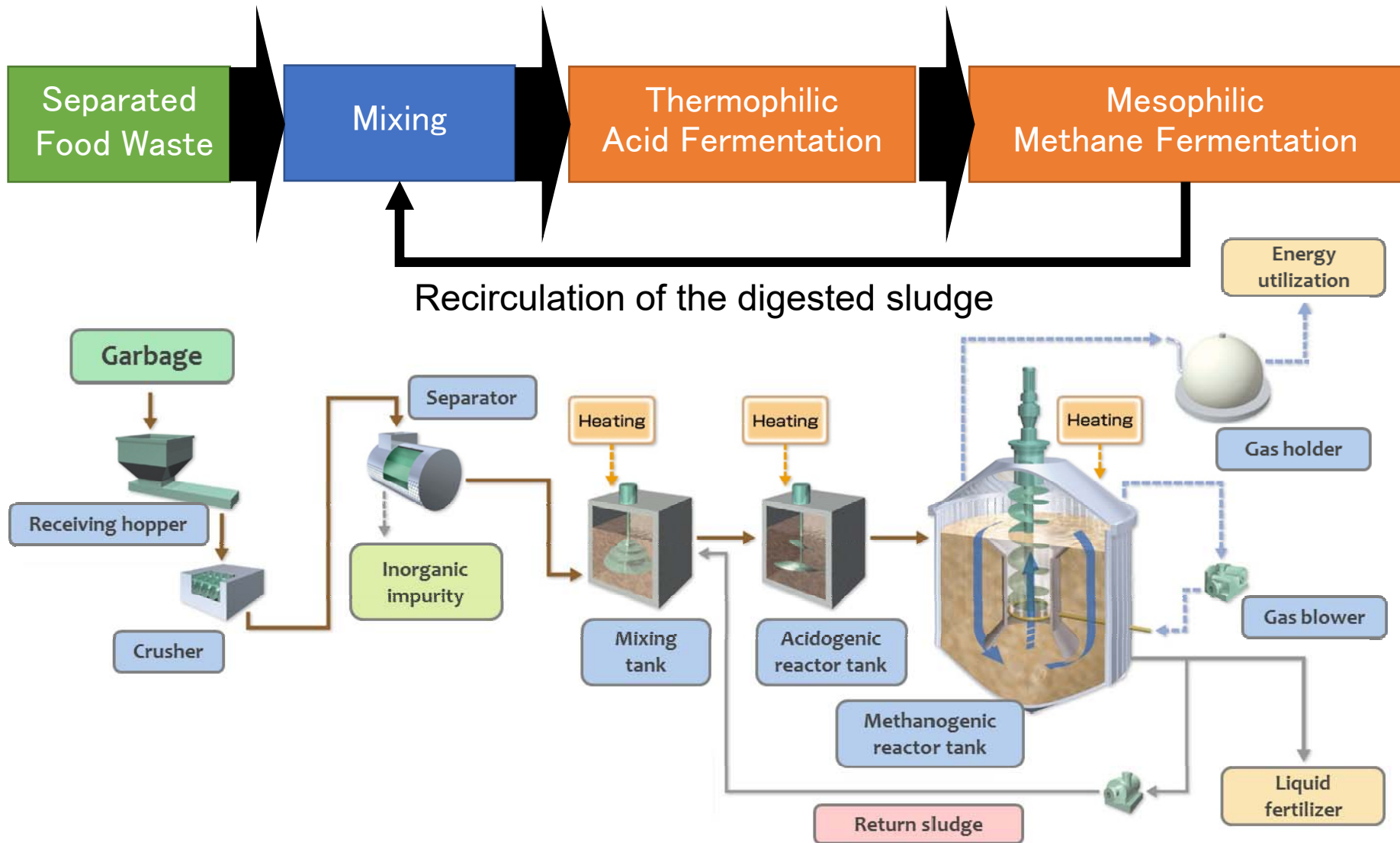
★Two-step fermentation:

WTM system consists of high temperature acidification & Mesophilic fermentation.

★Additional water Free:

WTM system does not require dilution water anymore.

WTM System Process flow





Technology for People, the Earth, and the Future

Hitachi Zosen creates links between mother nature and our future

 **YouTube** <https://www.youtube.com/channel/UCjE33TP7ryUtyty-sihaaUw>

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<http://www.hitachizosen.co.jp/english/>