

Waste Management & Recycling Services of DOWA

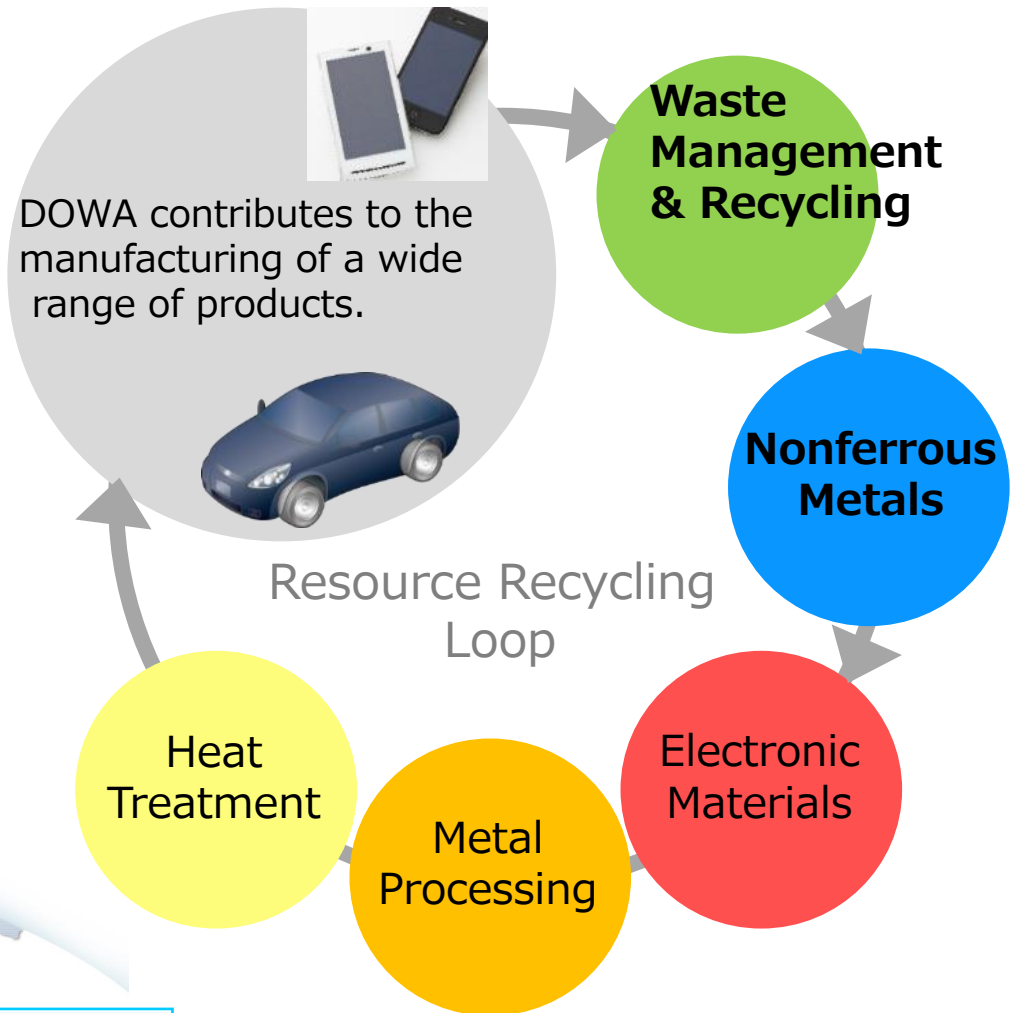
26th August, 2019

Kimio Matsumoto
Director

DOWA ECO-SYSTEM CO.,LTD.

Overview of DOWA Group

- **Foundation** 1884
- **Capital** *32 m USD
- **Net sales** *4.0 b USD
 - * At a rate of 112 JPY per USD
- **Employee** 6,700
- **Global activity**
 - ... Over 100 networks



Subsidiaries

Japan - 70

Asia - 30

Europe, America

- 10

DOWA's Waste Management & Recycling Services

Various inputs



Printed circuit board



Used home appliance



Shredder residue



Hazardous waste

Dismantling,
Separation



Intermediate
Treatment
(Incineration/ WtE)



Smelting

-Pyrometallurgy
-Hydrometallurgy



Various outputs

Nonferrous
Metals



Secondary
Materials
(Fe, Al,
Plastics, etc.)

Energy

Landfill

DOWA's Characteristics of Smelting

Collaboration of 3 smelters enables efficient recovery of various metals



Zinc concentrate,
Steel dust



Metal scrap



Printed circuit
board



Auto spent catalyst



Akita Zinc

Zn, In, Ge, Ga, Cd,
etc.



Kosaka Smelting & Refining

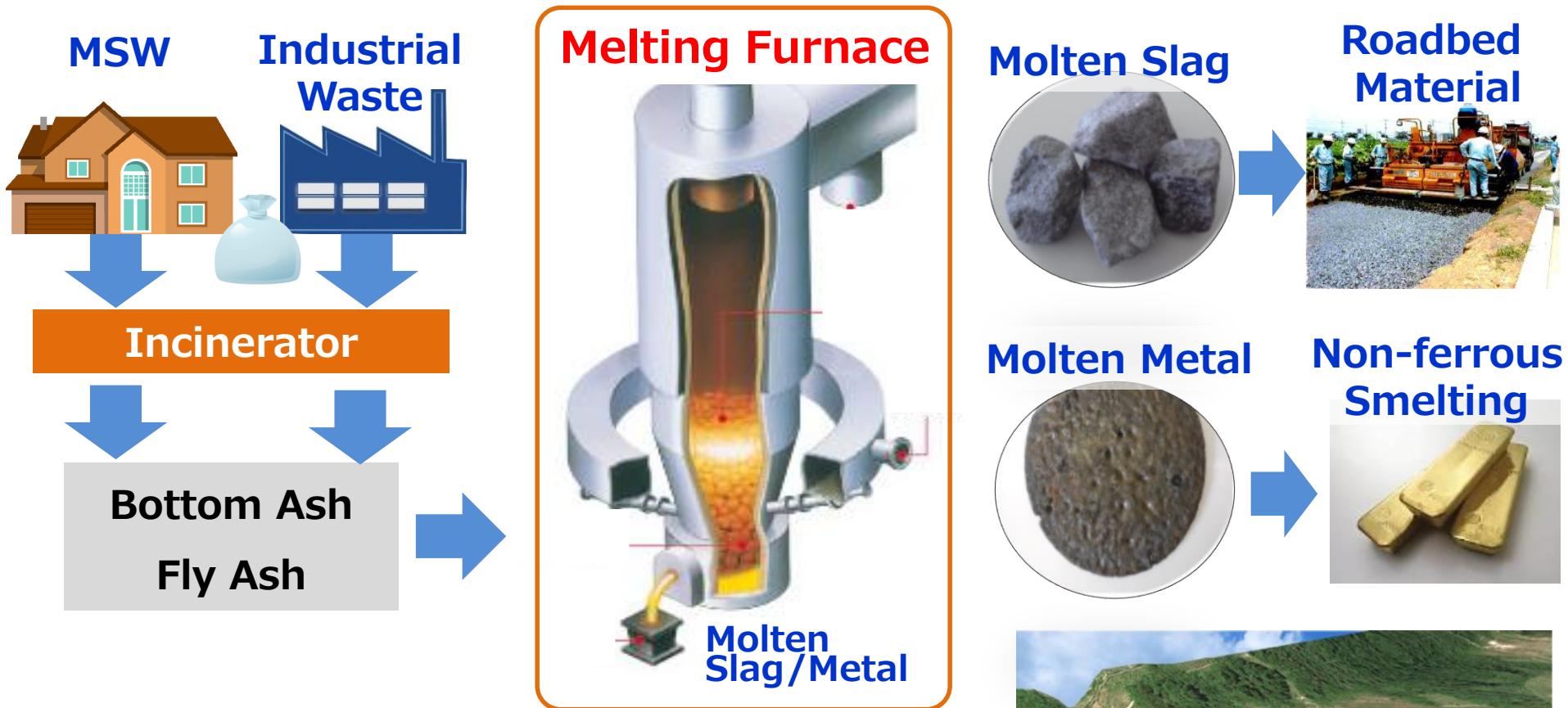
Au, Ag, Cu, Pb, Bi, Sn,
Sb, Ni, Se, Te, etc.



Nippon PGM

Pt, Pd, Rh, etc.

Recycling of Incineration Ash

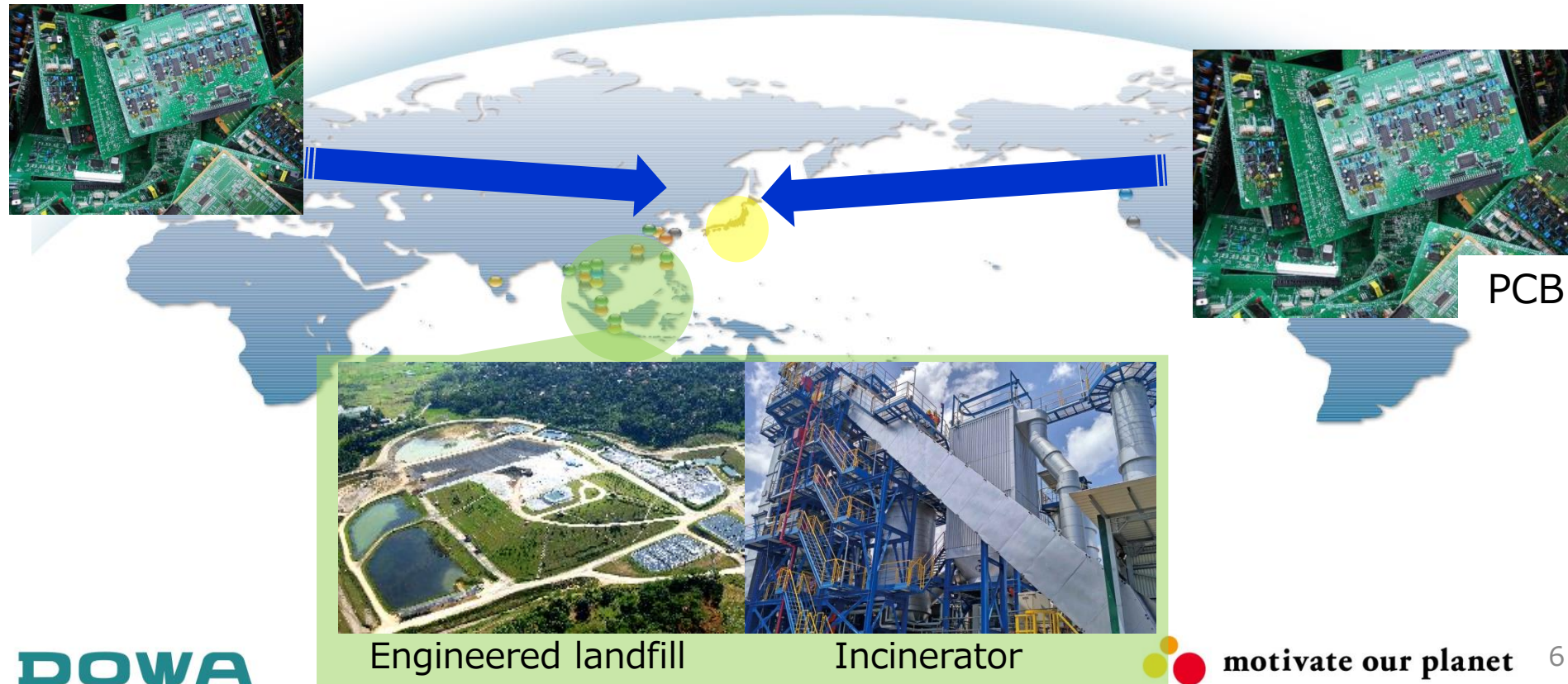


- ✓ 2 plants in Japan
- ✓ Harmony between Waste management and Recycling
- ✓ Zero landfill



Global Activities

- **Recycling:**
Global trade of E-scrap, intensive recovery in Japan
- **Waste management:**
Various services, following each country's regulations and needs
; Indonesia, Thailand, Singapore and Myanmar





motivate our planet

