

Repair, Refurbishment and Testing by Japanese Manufacturers achieving Product Quality/Safety Assurance and Environmental Conservation

The Japanese Four Electrical and Electronic Industry Associations

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Outline

0. About us

1. Our Mission and Current Operations for Used Products

2. Cases

3. Survey Results

4. Conclusions



About Us

- **Basel Task Force** established in Dec 2012 under the Japanese Four Electrical and Electronic Industry Associations

- The Japan Electrical Manufacturers' Association (JEMA) / **275** companies
- Japan Electronics and Information Technology Industries Association (JEITA) / **397** companies
- Communications and Information network Association of Japan (CIAJ) / **227** companies
- Japan Business Machine and Information System Industries Association (JBMIA) / **53** companies



- **Member companies**

- Fuji Xerox (chair)
- Canon (co vice-chair)
- Sony (co vice-chair)
- Fujitsu
- Mitsubishi Electric
- NEC
- Panasonic
- Ricoh
- IBM Japan (observer)
- HP Japan (observer)



Our Mission

- To enrich people's lives through providing **safe and high-quality products with due consideration to the environment**
- To provide promptly appropriate **product guarantees and maintenance services** in case of occurrence of defective products or product failures
- To give consideration to **attain both environmental conservation and economic efficiency** on a global basis in accordance with the **“Mottainai Spirit (a Japanese traditional value to avoid waste)”** throughout the whole life cycle of electrical and electronic equipment

Current Operations for Used Products

● Repair/Refurbishment

- Defective/used products are shipped (export/import) to the repair/refurbishment center with specialized techniques/technologies
- Repaired/refurbished products are back to customers and used continuously
- Contributes to **reduction of waste and effective utilization of resources** by extending the useful life of valuable products as well as by limiting demand for new natural resources

● Testing (e.g. failure analysis, field test)

- Defective products are shipped (export/import) to the development center or the quality assurance center of the manufacturer
- Results of testing are reflected on the product development on a timely manner
- Contributes to **development and supply of future products to be used safely for a long time** by preventing product failure and improving product quality

Effective, efficient and uniform services are made possible by **regionally centralized facilities covering several countries**

Cases

- 1. Refurbishment in Thailand - Ricoh & Fuji Xerox**
- 2. Testing in Thailand - Mitsubishi Electric**
- 3. Repair in Malaysia**



Refurbishment in Thailand



- Approx. 50 workers, 1,200 m²
- 400 - 500 units/month
- Multi Functional Printers (MFP), Printers

1. Receive

2. Storage

3. Removal of covers

4. Interior cleaning



5. Exterior cleaning

6. Parts exchange

7. Assurance

8. Packaging

9. Shipping

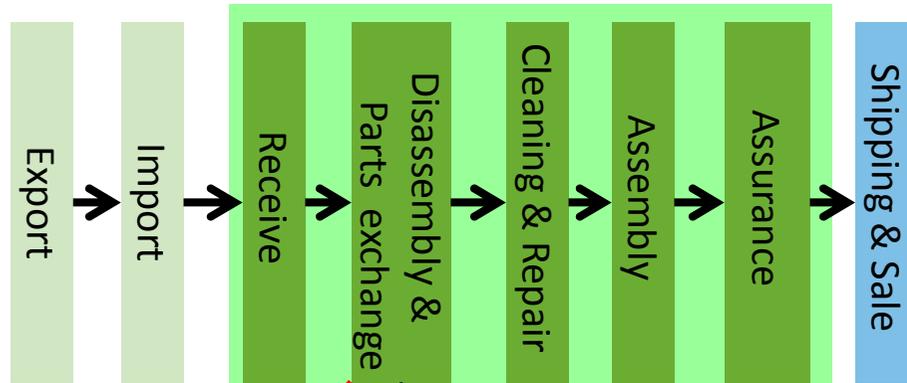


Refurbishment in Thailand



Processes established with strong support by the government of Thailand

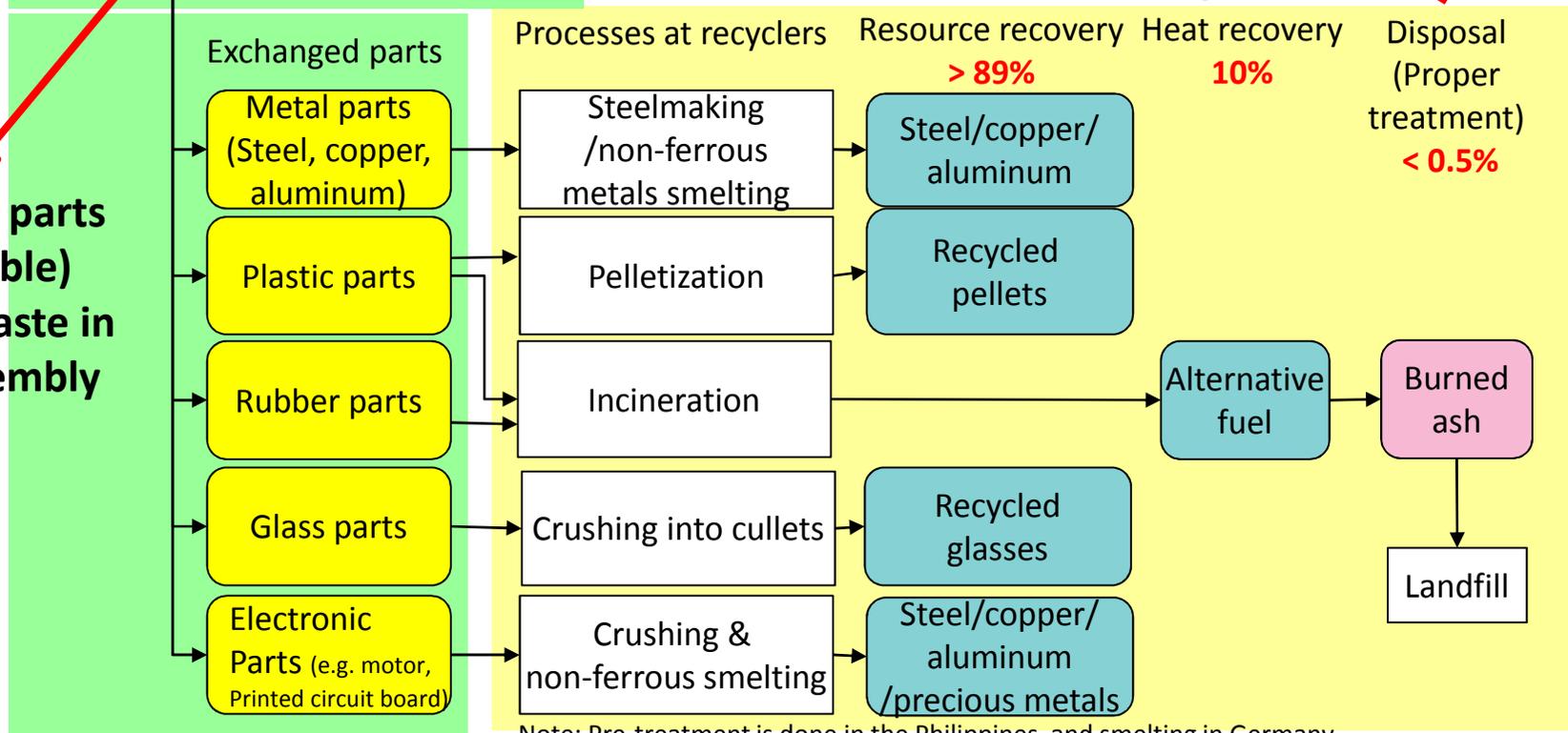
Processes at site



Little hazardous waste is generated from equipment compliant with applicable chemical regulations worldwide

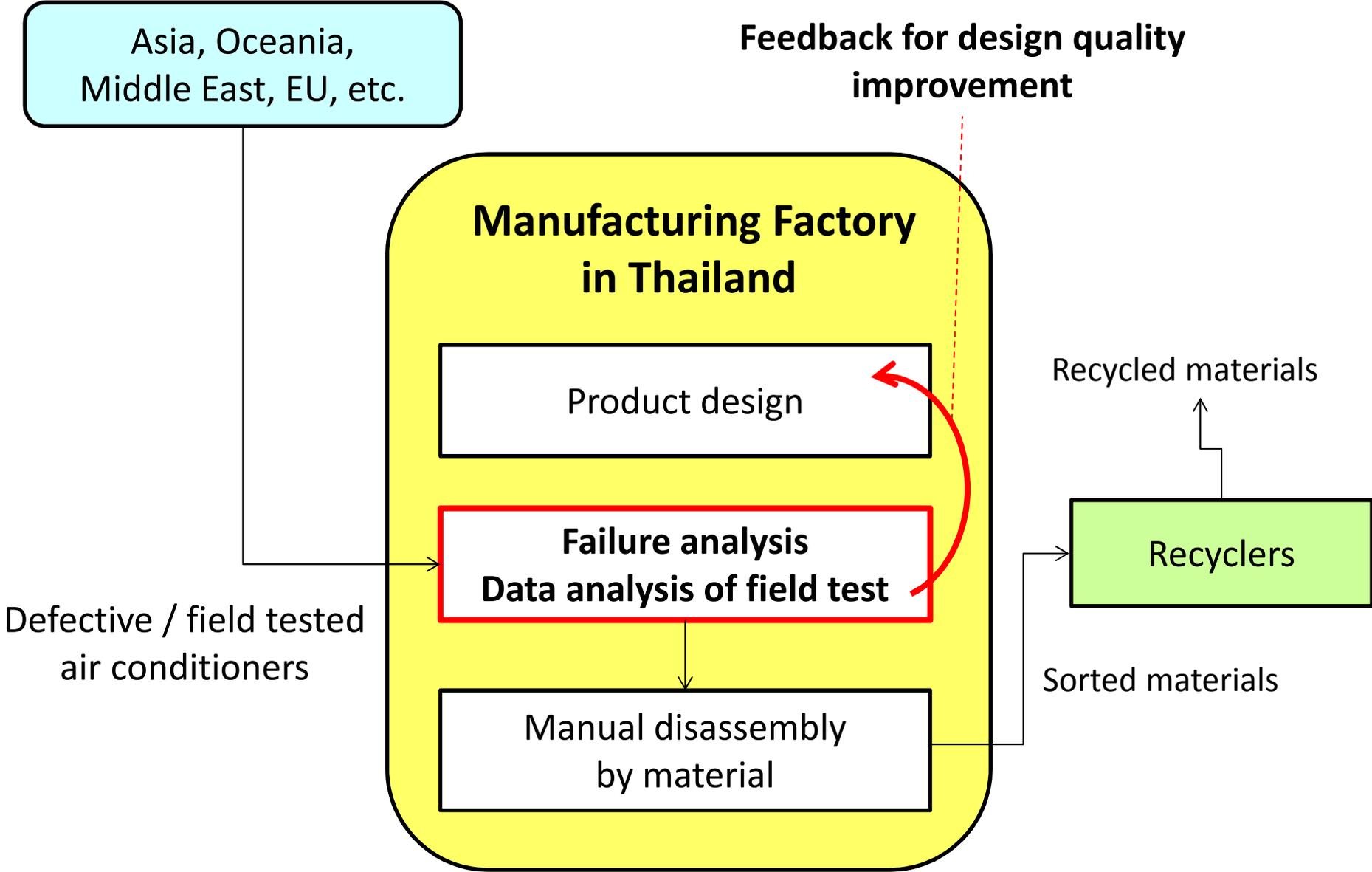
Authorized Recyclers

Exchanged parts (non reusable) become waste in the disassembly process



Note: Pre-treatment is done in the Philippines, and smelting in Germany.

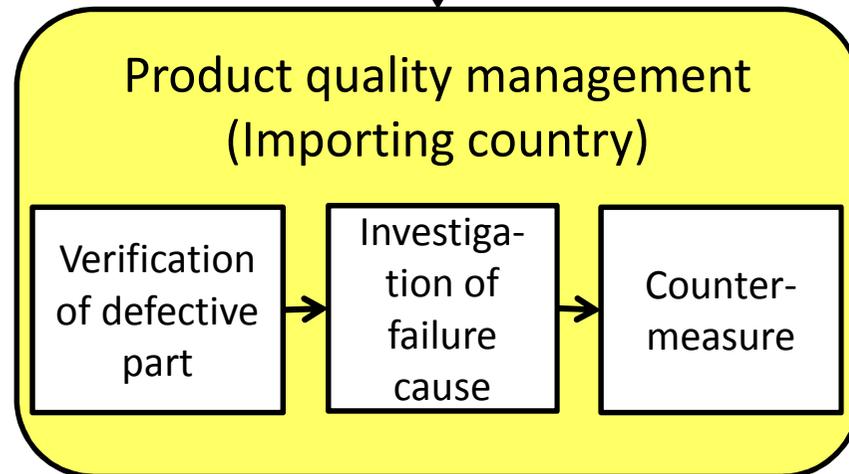
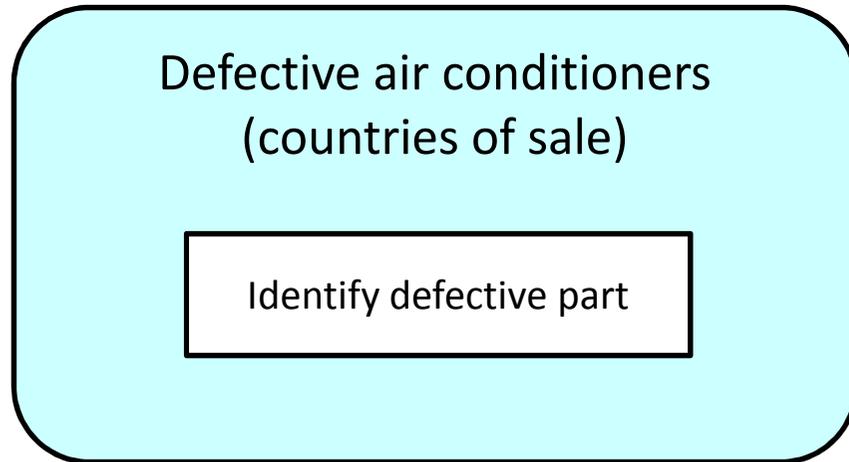
Testing in Thailand



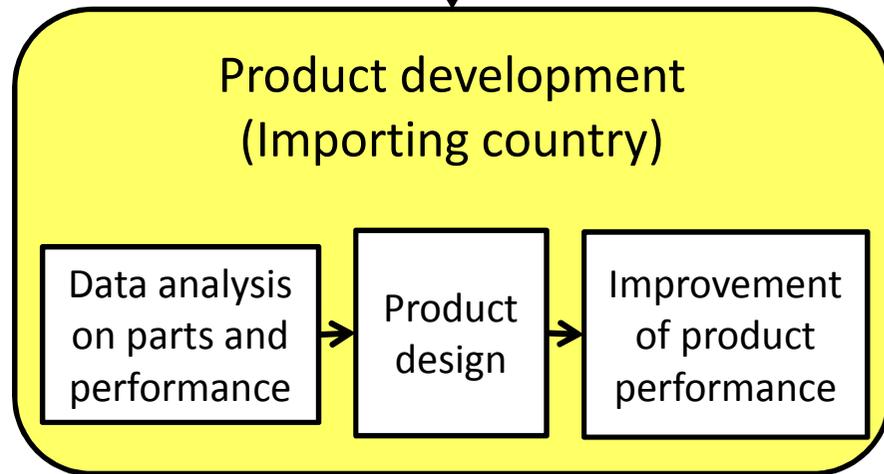
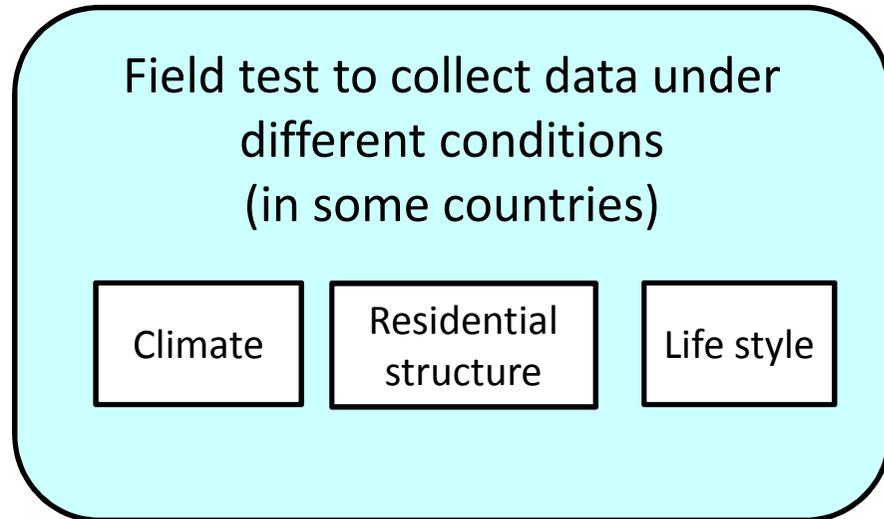
Testing in Thailand



Failure analysis



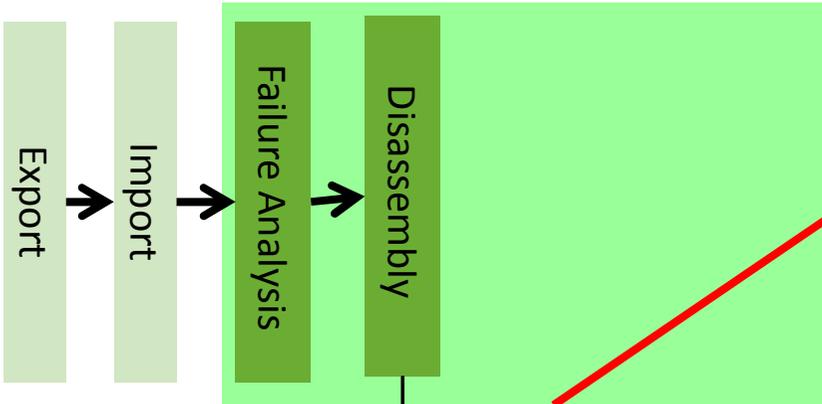
Data analysis of field test



Testing in Thailand

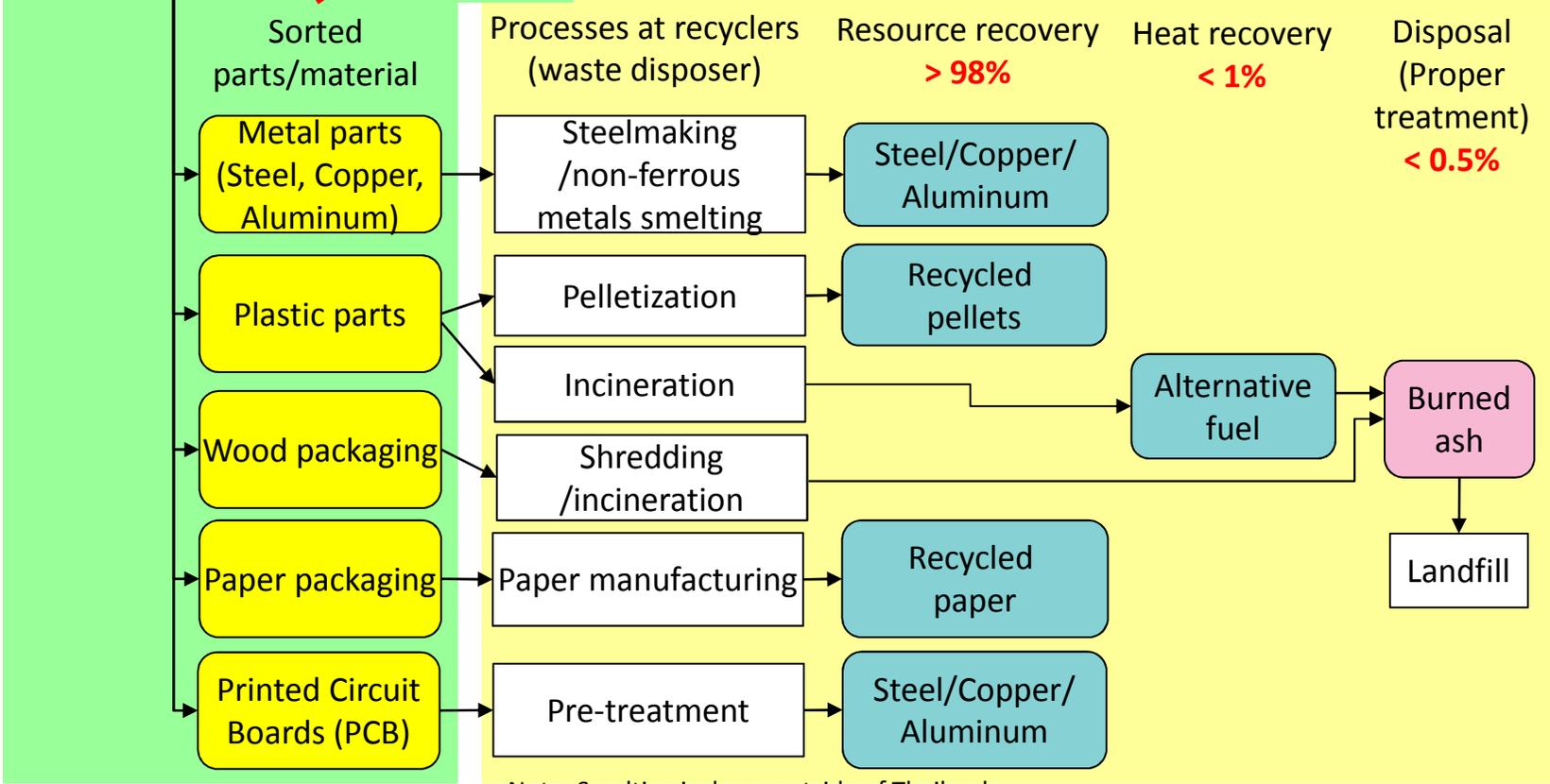


Processes at site



Products after failure analysis are transported to waste management center and sorted to each materials for recycling.

Authorized Recyclers



Note: Smelting is done outside of Thailand.

Repair in Malaysia

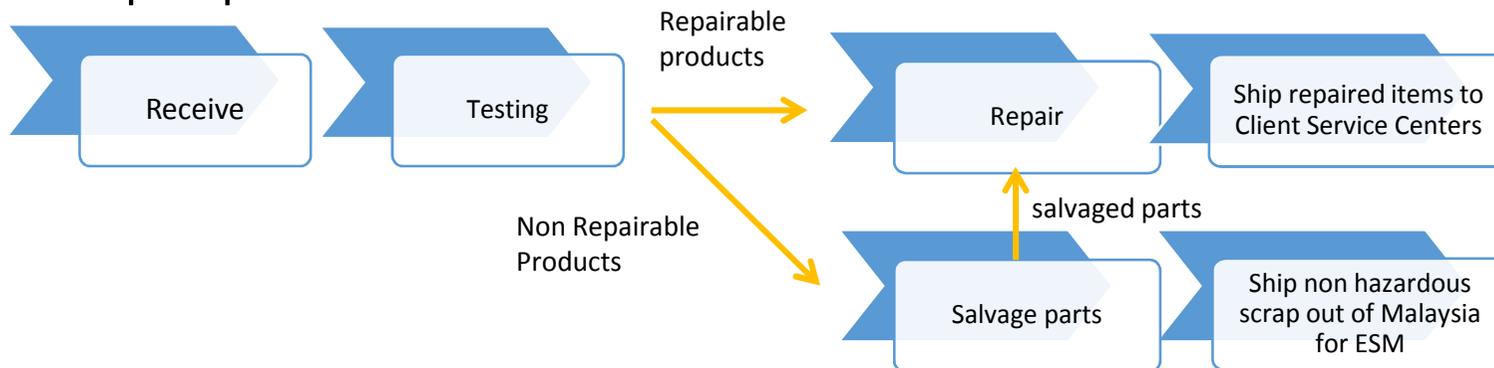
- Malaysian Government allows repair operations for many companies on the basis that:-
 - Product shipped in for repair, if non repairable must be shipped out for ESM – usually in Singapore

Product for repair is received from 14 Countries

Repaired product shipped out to 5 Countries

- Scheduled Waste (hazardous waste) generated locally from repair operations stays within Malaysia for treatment by a DOE approved facility:-

Repair process includes:



Scheduled Waste

Repairing IT Products and Parts

Volumes – 1 facility
= 13,000+ pcs per month

600+
Employees

Manufacturing factory operating refurbishment



Receiving of Used Products



- Palletised
- Properly packaged
- Labelled

Packaging

- Individual/collective packaging
- Cushioned



Storage



Interior View



- Parts exchange
- Assurance



Ready for shipping



Waste management center (in manufacturing factory)



Stored parts (heat-exchanger before disassembling)



Disassembled materials

Steel



Aluminum fin



Copper pipe



Printed circuit board



Survey Results

Estimated Yearly Amount of Transboundary Movement of Used Products

tons/year

| Type of used products | Purpose | Estimated yearly amounts imported /exported |
|-----------------------|------------------------------------|---|
| Product body | Repair, Refurbishment, and Testing | 17,500 |
| Spare parts | Repair, Refurbishment, and Testing | 1,100 |
| Total | | 18,600 |

*1 The figures above represent not only imports and exports from/to Japan, but also those between overseas offices of Japanese manufacturers.

*2 The figures come from part of the Japanese manufacturers.

Survey Results

Trade Patterns of Transboundary Movement of Used Products

tons/year

| FROM | TO | Quantities per year |
|--------------------|----------------------|---------------------|
| OECD countries | → OECD countries | 17,100 |
| OECD countries | → Non-OECD countries | 750 |
| Non-OECD countries | → OECD countries | 300 |
| Non-OECD countries | → Non-OECD countries | 450 |

* The figures come from part of the Japanese manufacturers.

Survey Results

Trade Patterns of Transboundary Movement of Used Products

tons/year

| TO → FROM ↓ | Japan | North America | Europe | Asia/ Oceania | Africa/Mid dle East | Central/ South America | Total |
|------------------------------|-------|------------------|--------|------------------|------------------------|------------------------------|--------|
| Japan | 0 | 0 | 0 | 400 | 0 | 0 | 400 |
| North America | 1 | 38 | 0 | 0 | 0 | 17,151 | 17,190 |
| Europe | 1 | 0 | 45 | 54 | 240 | 0 | 340 |
| Asia/ Oceania | 0 | 0 | 87 | 402 | 0 | 0 | 489 |
| Africa/Middl e East | 0 | 0 | 141 | 0 | 0 | 0 | 141 |
| Central/ South America | 0 | 36 | 0 | 0 | 0 | 4 | 40 |
| Total | 2 | 74 | 273 | 856 | 240 | 17,155 | 18,600 |

* The figures come from part of the Japanese manufacturers.

Survey Results

Estimated Yearly Amount of Waste

tons/year

| | Waste | Hazardous waste out of the total waste |
|--------------------|--------------|---|
| OECD countries | 1,175 | 196 |
| Non-OECD countries | 177 | 26 |
| Total | 1,352 | 222 |

*1 The figures above are for the total transboundary movement of **18,600 tons/year**

*2 Hazardous waste is those listed in Basel Convention Annex VIII Table A
(e.g. printed circuit boards, CRT, fluorescent tube)

Survey Results

Waste Management (some specific cases in Thailand and Malaysia)

| Type of sorted material/component | Treatment | Traceability | Authorized services | Check of treatment process |
|-----------------------------------|---|--------------|---------------------|----------------------------|
| Iron/non-ferrous metal | Material recovery (smelting) | Yes | Yes | Yes |
| Plastic | Material recovery, Partially heat recovery and landfill | Yes | Yes | Yes |
| Glass | Material recovery, Partially landfill | Yes | Yes | Yes |
| Composite parts | Material recovery | Yes | Yes | Yes |
| Hazardous component | Material recovery (smelting) | Yes | Yes | Yes |

Conclusions

- Our transboundary movement of used products for repair/refurbishment/testing are **distinct from improper export/import conducted by some traders**
- Repair/Refurbishment of used products allows **realizing reduction of waste and effective utilization of resources**
- Testing contributes to **development of future products with enhanced safety and longer life**
- All processes of current operations are **well controlled**
- We are **managing waste including those hazardous** generated from repair/refurbishment/testing **in an appropriate manner**

Regarding the E-waste Guidelines

We need your support to continue our legitimate repair/refurbishment/testing currently being operated globally.

Conditions need to be:

Feasible; and

Acceptable for all stakeholders

Thank you very much!

FUJI XEROX 

Canon

SONY

FUJITSU



NEC

Panasonic

RICOH

IBM



JEITA

