Current Practice of recycling and treatment of hazardous waste from ESM perspective in Asia - ICT Manufacturers

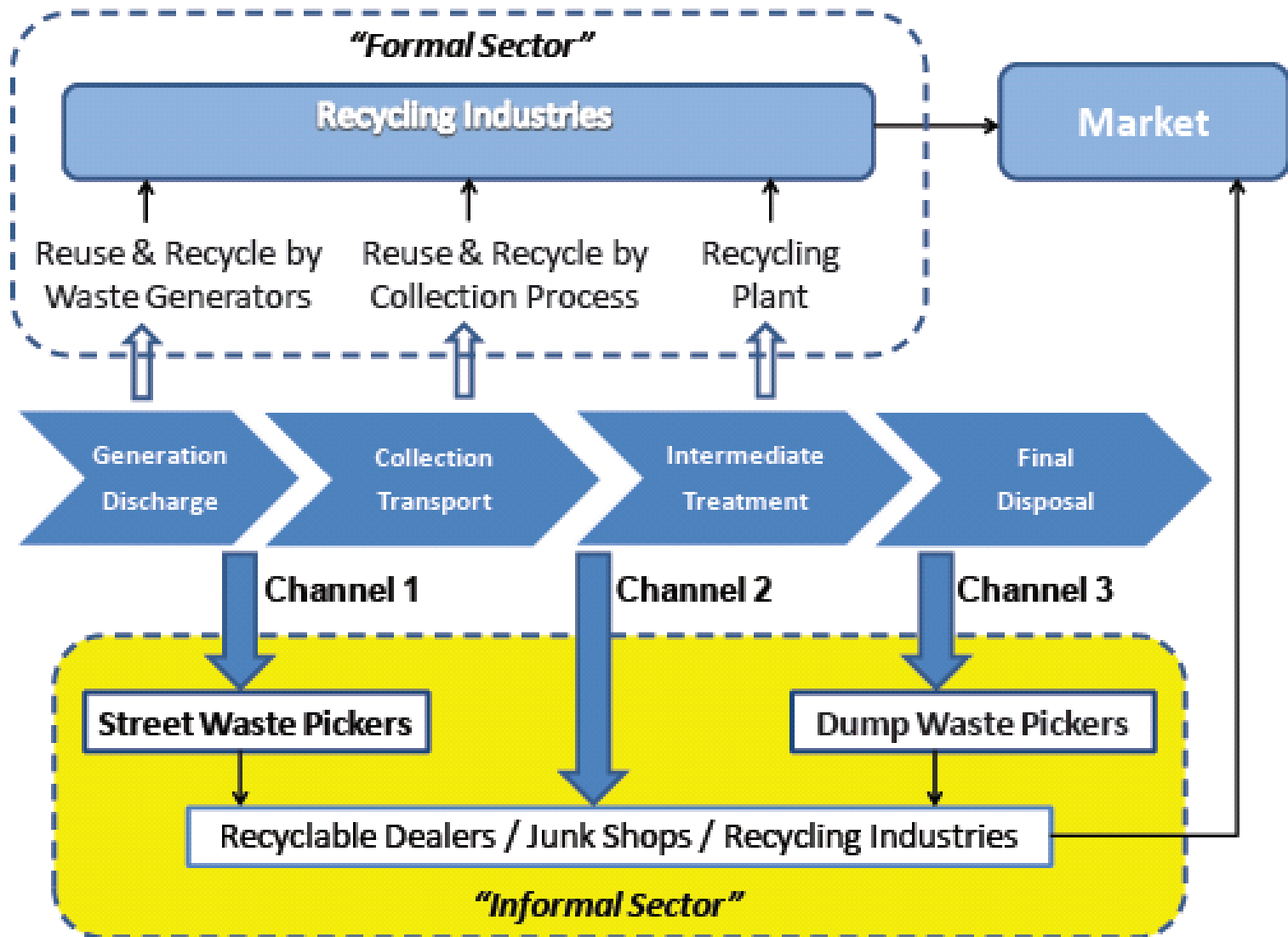*Monina De Vera*
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19th Nov 2012

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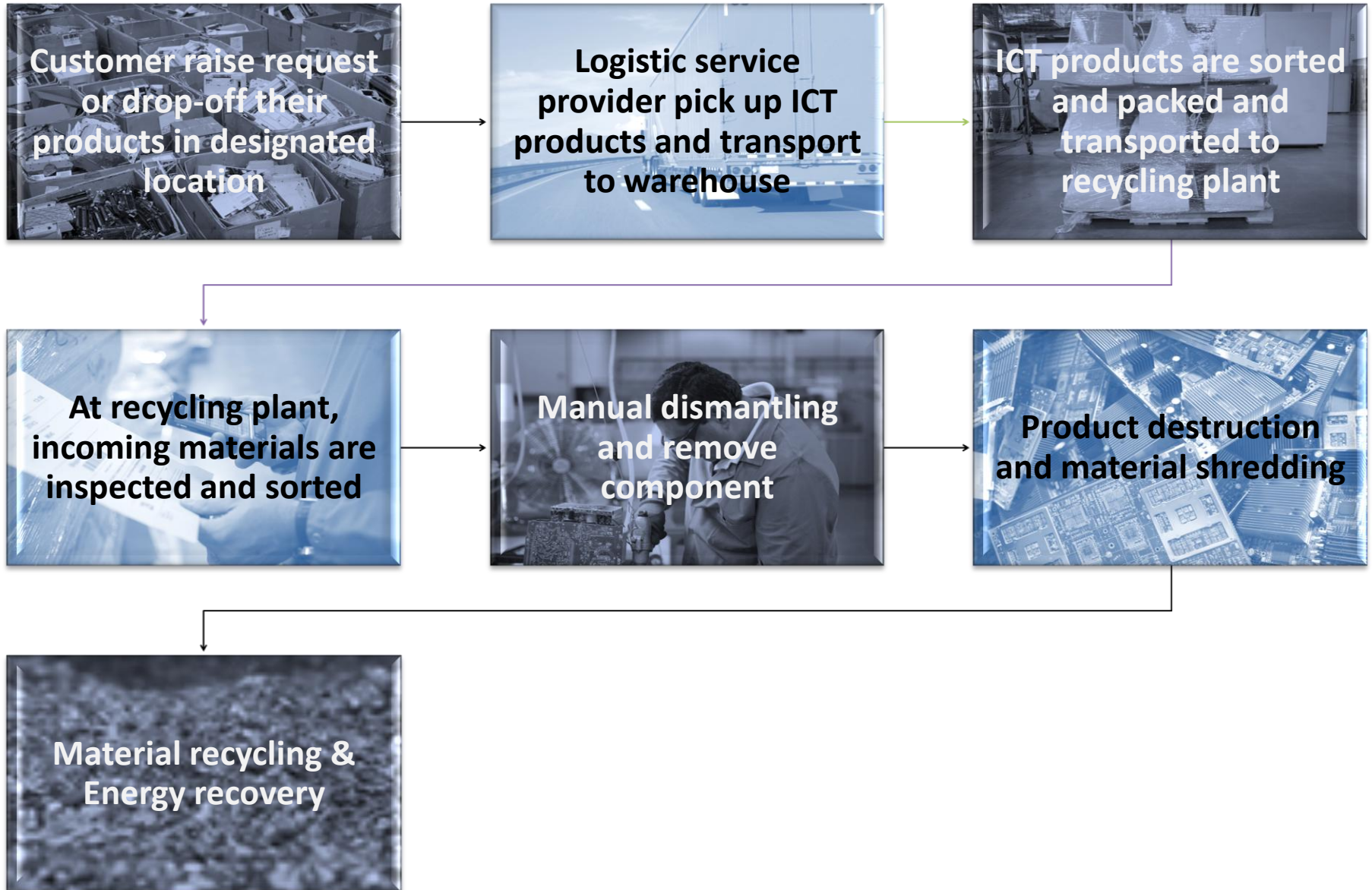- Recycler ESM Practice

Background of ICT Group

- A group of Infocomm Technology (ICT) and Consumer Electronics (CE) companies formed in 2008 to discuss environmental topics
- At present, the group has 13 members from major global companies
- Voluntary participation
- Regional coverage
- Commonly on Southeast Asia with some company representatives covering other countries of Asia & Australasia
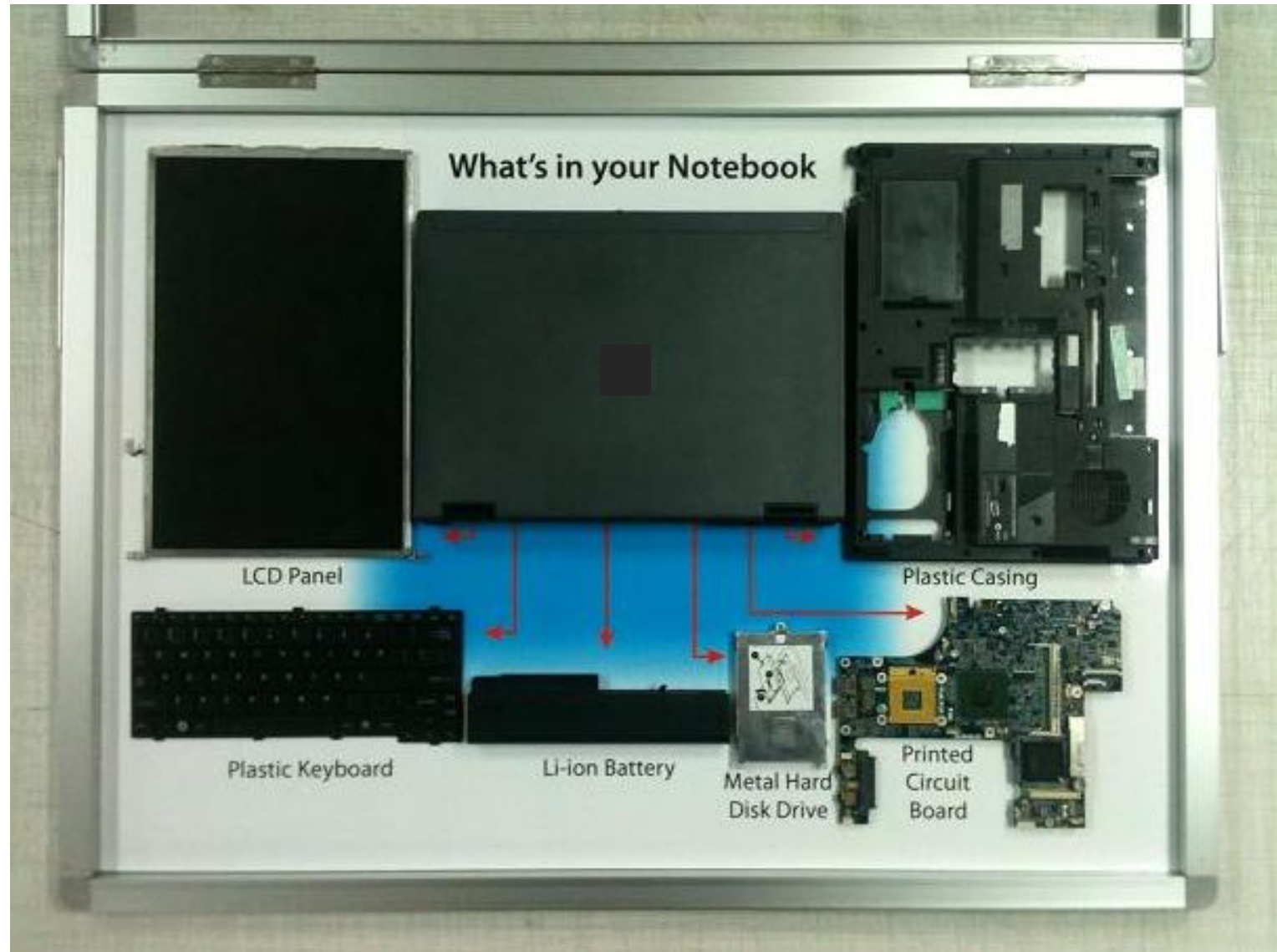
E-Waste Flow: Reality of Formal/Informal Flow

"Formal Sector"

Recycling Industries → Market

Reuse & Recycle by Waste Generators · Reuse & Recycle by Collection Process · Recycling Plant

Generation Discharge · Collection Transport · Intermediate Treatment · Final Disposal

Channel 1 · Channel 2 · Channel 3

Street Waste Pickers · Dump Waste Pickers

Recyclable Dealers / Junk Shops / Recycling Industries

"Informal Sector"

General Recycling Process of ICT products

Customer raise request or drop-off their products in designated location

Logistic service provider pick up ICT products and transport to warehouse

ICT products are sorted and packed and transported to recycling plant

At recycling plant, incoming materials are inspected and sorted

Manual dismantling and remove component

Product destruction and material shredding

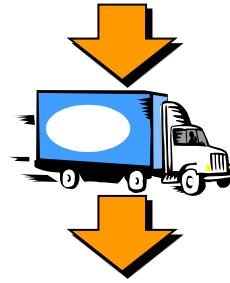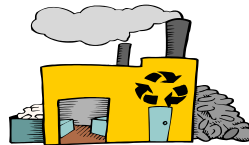**Material recycling & Energy recovery**

What's In Your Notebook?

Recycling of downstream materials of a notebook

Customer

Logistics Provider Transports

Recycling Facility

Dismantling of Notebook (In-country)

Ferrous/ Non-Ferrous Metals	Plastics	Glass	Flex	Li-Ion Battery	PCB Boards
Local Metal Vendors	Local Plastics Vendors or Recycler Produce Plastic Pallet	Local Glass Vendors	Ship to country where Recycler has full recycling facility (i.e. mechanical & chemical treatment facility)		
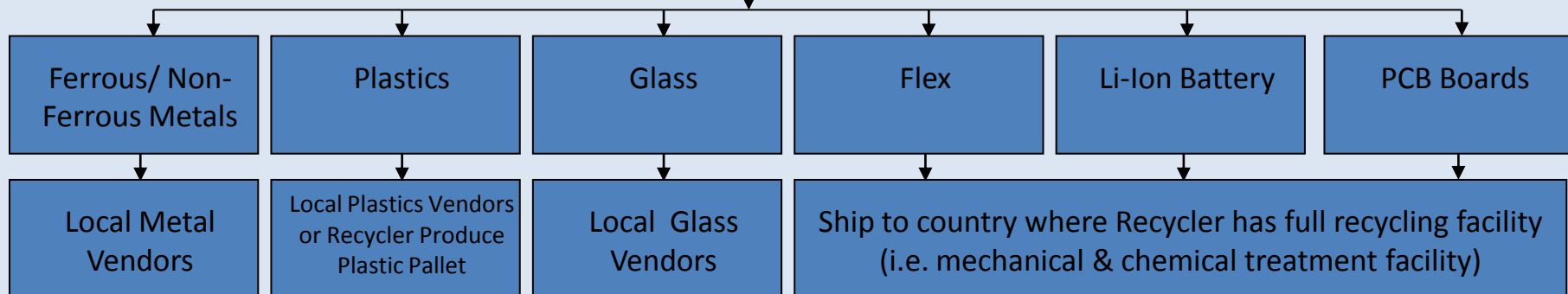
Manufacturers and Recyclers collection footprint in Asia Pacific

★ Countries with WEEE regulation

● Country where most ICT vendors have a collection program/ Recycler's facility is also located

▲ Full Recycling Facility
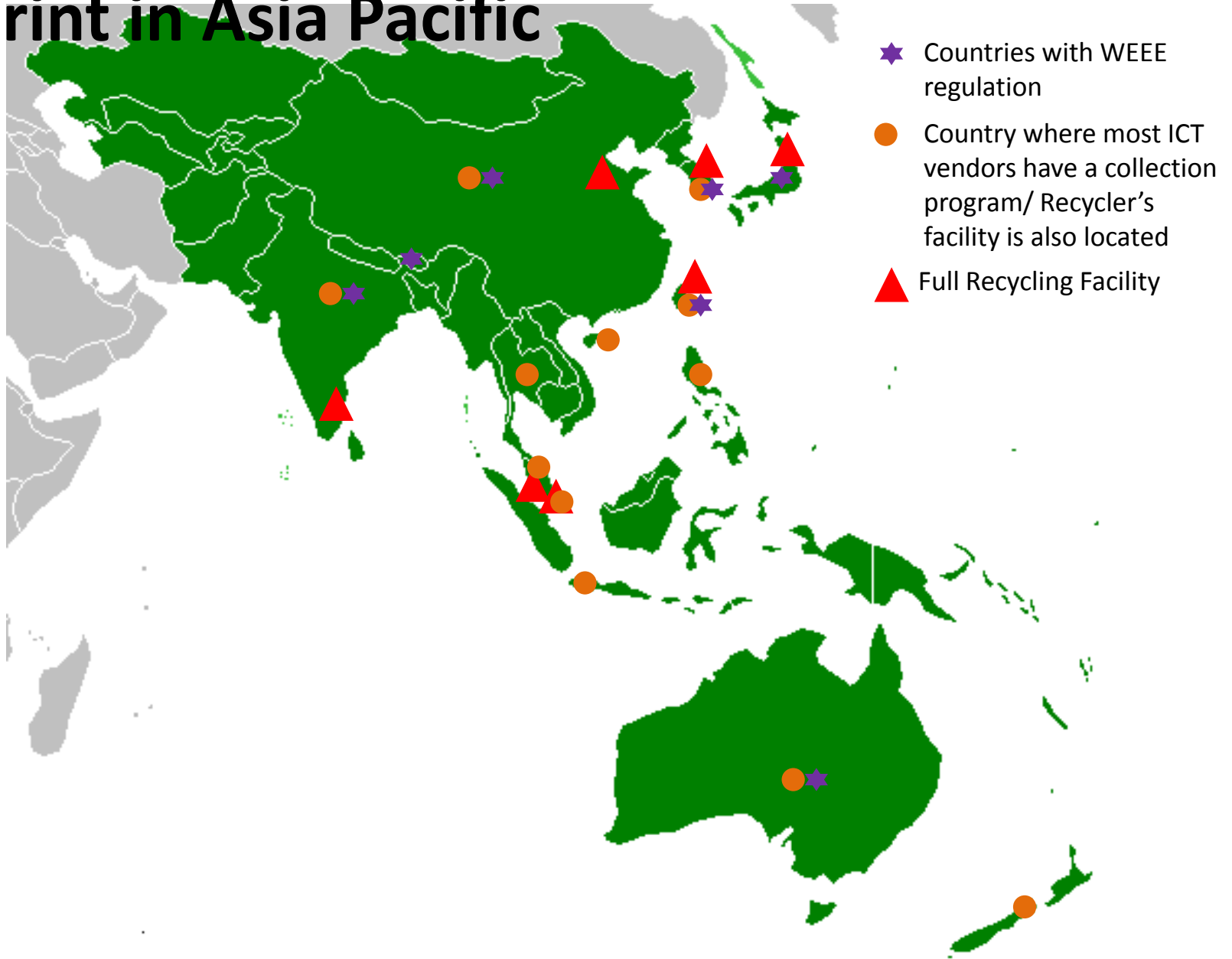
Recyclers Management Practice by Manufacturers (Page 1 of 2)

1. Recycling Standards. This standard defines the requirements for vendors who recycle or dispose of e-waste or materials. Standards include:

    *   Code of Conduct and Ethical Business Practices

    *   Guidelines on reuse and recycling

    *   Landfill avoidance

    *   Insurance

    *   Use of sub-vendors

    *   Audit of vendors and documentation

    *   Processing requirements

    *   Product and materials tracking and accountability

    *   Transboundary shipment

    *   Information security

    *   Site security

    *   Approved dispositions

Recyclers Management Practice by Manufacturers (Page 1 of 2)

2. Yearly On-Site Audit of Vendors/Every 3 year period for subvendors

- Facility Audit
- Desk Audit
- Materials Audit
- Process Audit
- Security Audit

3. Require ISO 9K, 14K and (preferred vendor with) R2 certification

ESM Practice of Recycler

1. Generally, for the classification of the e-waste, recycler will consult the exporting country's Competent Authority (CA). The other option for the classification of the e-waste is from the Basel Convention Website.

2. Follows detailed description of the control procedure of the Basel Convention on Transboundary Movement of Hazardous Wastes and their Disposal.

3. Follows detailed requirement of country's regulation in transportation, storage and recycling of Hazardous Waste and their Disposal.

4. Develop new technologies to improve current recycling and treatment of materials.

In Summary

1. Manufacturers set standards, policies and guidelines on management of e-waste.

2. Manufacturers work with recyclers to build capacity and capability to recycle it's products in country.

3. Manufacturers are supporting any means to restrict illegal exports/imports of e-waste. However, measures/controls established should not stop legitimate repair practices in centralized repair centers.

THANK YOU