



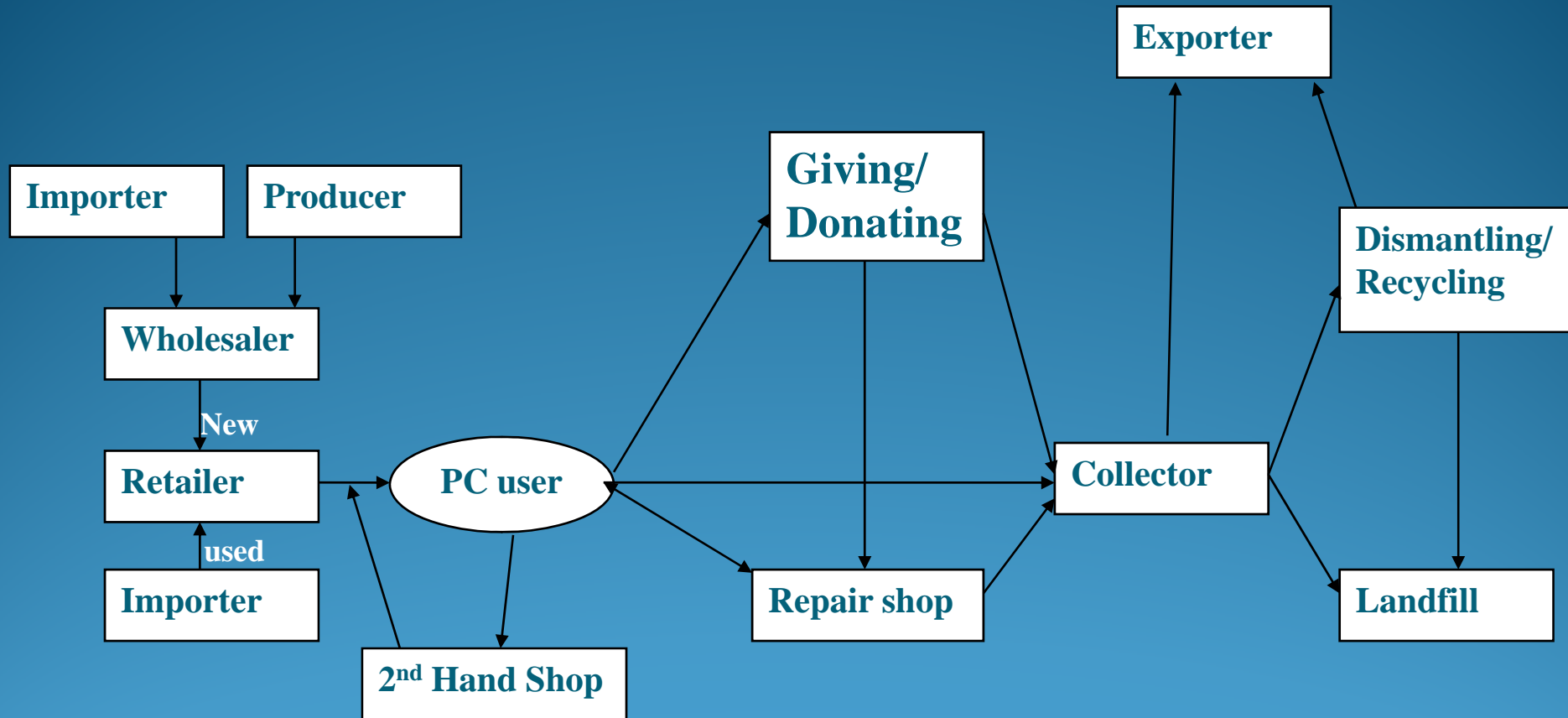
# Toward ESM of 2<sup>nd</sup> hand EEE and E-wastes: Thailand

Waste and Hazardous Substance Management Bureau  
Pollution Control Department  
Ministry of Natural Resources and Environment

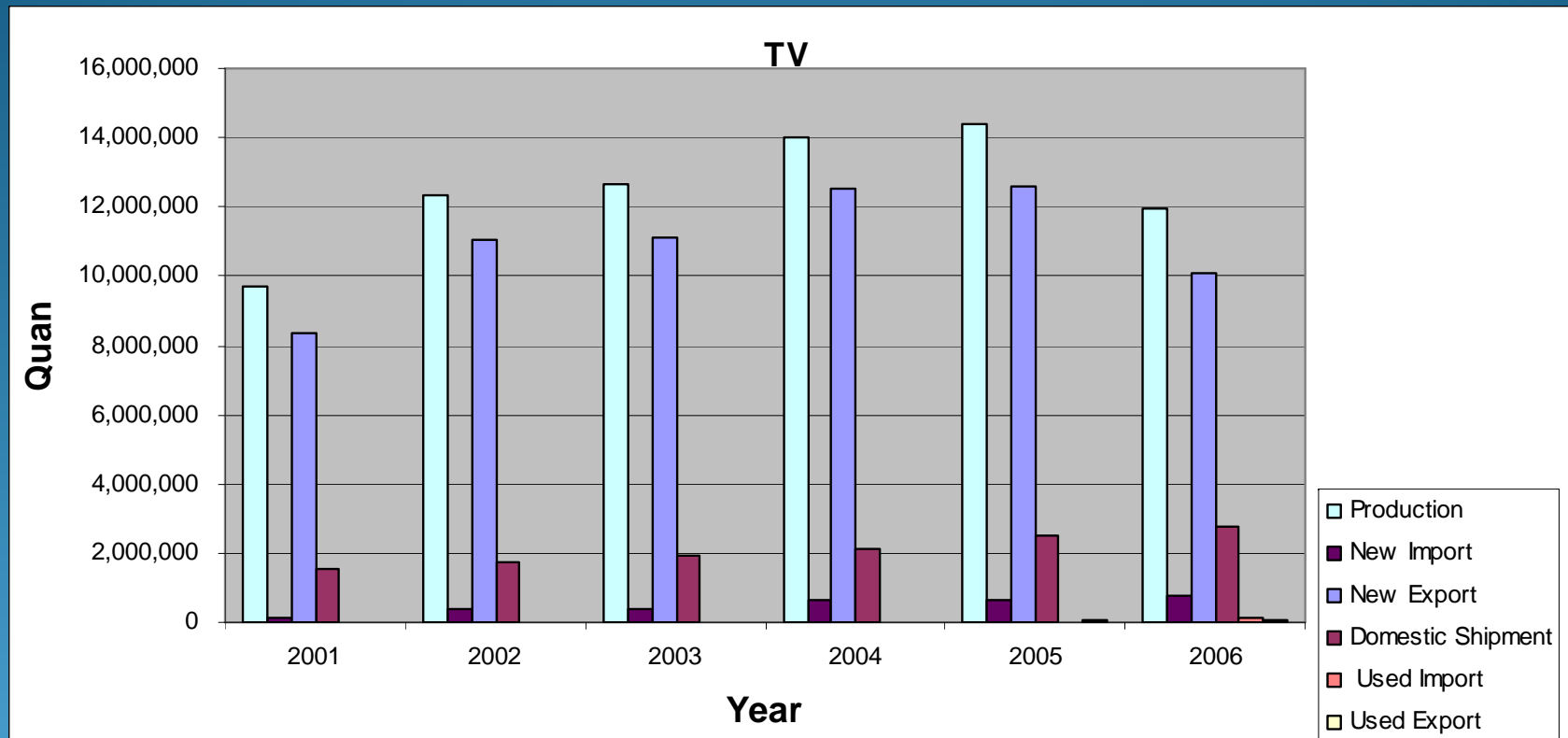
# Inventory of E-waste in Thailand

- 1200 questionnaires:
  - Households
  - Offices
  - Business- collectors, 2<sup>nd</sup> hand shops, repair shops, recyclers, importers, exporters, waste processors and their associations
- Methods used:
  - Telephone interview
  - Face-to face interview
  - Fax and follow up by telephone if necessary

# Simplified Flow of E-waste



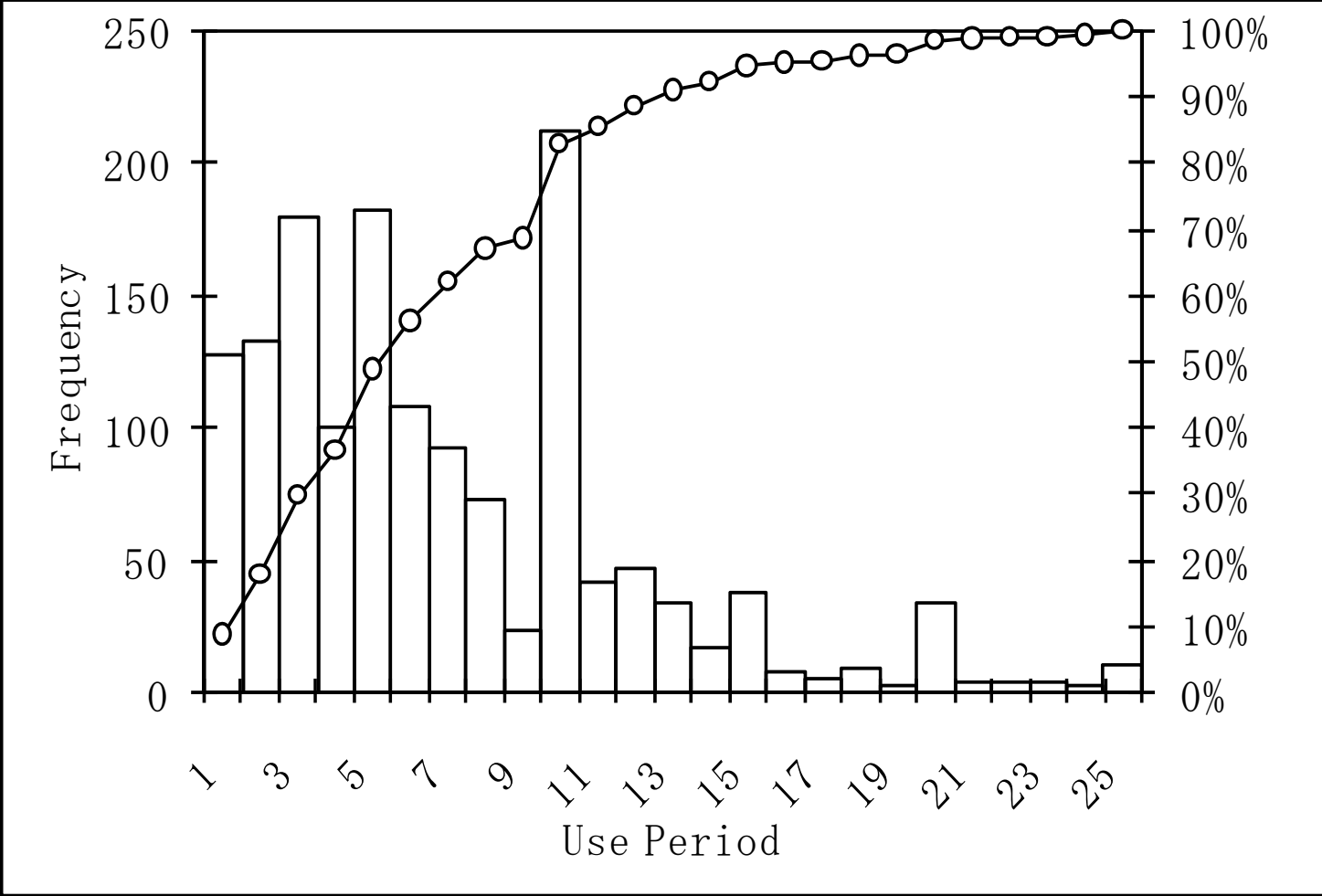
# TV statistics



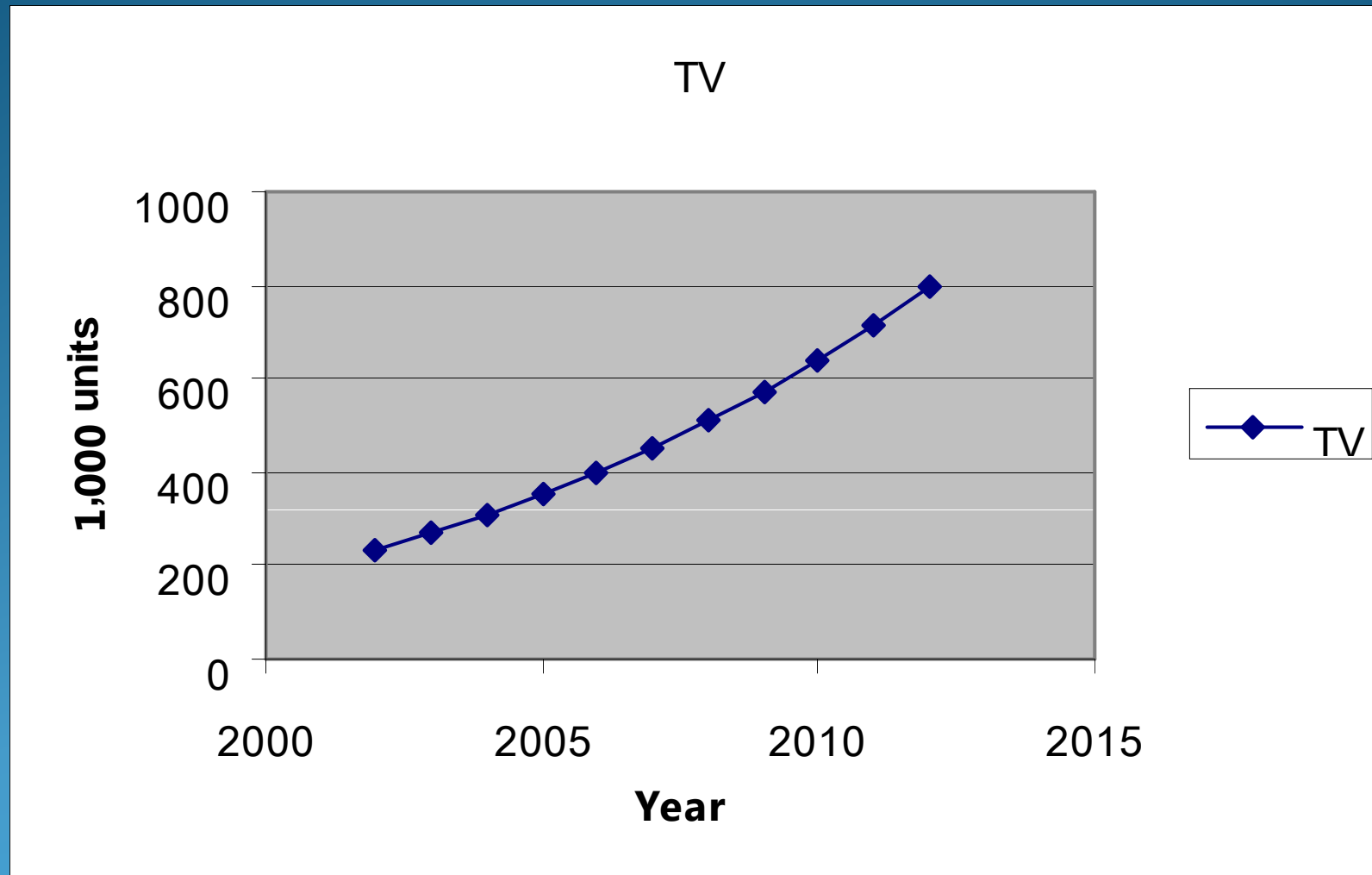
# Disposal Method (%)

TV	Household Income Level			Hotel (by # of Rooms)			Office (by # of Employee)		
	High	Med	Low	Small	Med	High	Small	Med	High
Discard as municipal waste	3.08	2.77	3.67	0.89	0.97	7.69	3.77	-	-
Sell to the collector	21.03	24.51	30.51	54.46	45.63	50.00	23.48	28.00	21.43
Pay to collector	-	-	-	-	-	-	0.29	-	-
Give to friend/relatives	31.79	21.74	18.08	19.20	22.33	23.08	26.96	16.00	17.86
Bring to recycling station	-	0.40	0.28	0.45	2.91	3.85	2.03	8.00	17.86
Keep at home without and specific purpose	22.05	29.25	29.10	16.07	21.36	-	22.32	28.00	17.86
Keep at home and reuse for specific purpose	20.00	20.55	16.95	7.59	5.83	15.38	18.55	16.00	17.86
Other	2.05	0.79	1.41	1.34	0.97	-	2.61	4.00	7.14
Total	100	100	100	100	100	100	100	100	100

# Life span of TV

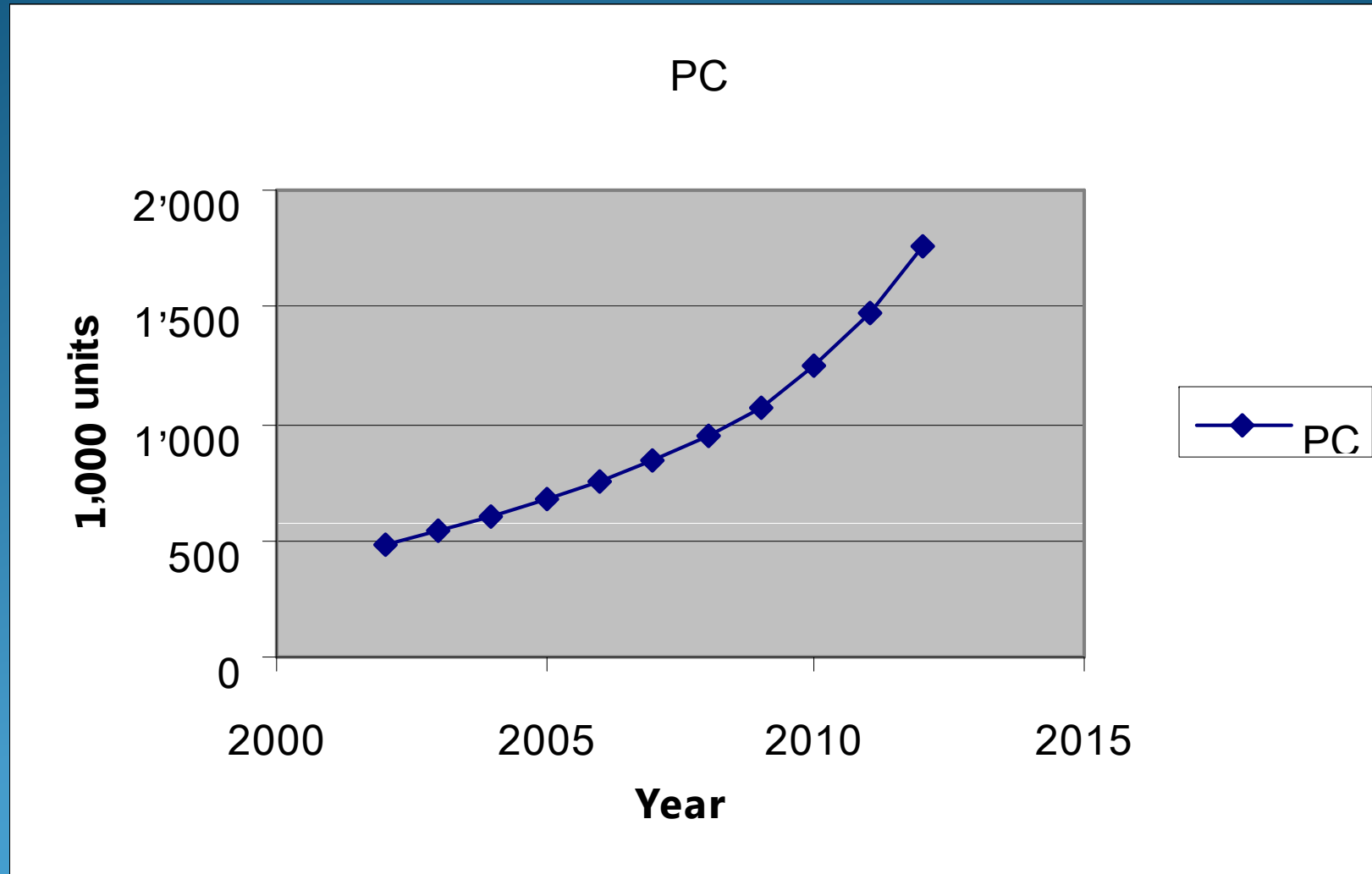


# Waste TV generation



Source: EEI, 2007

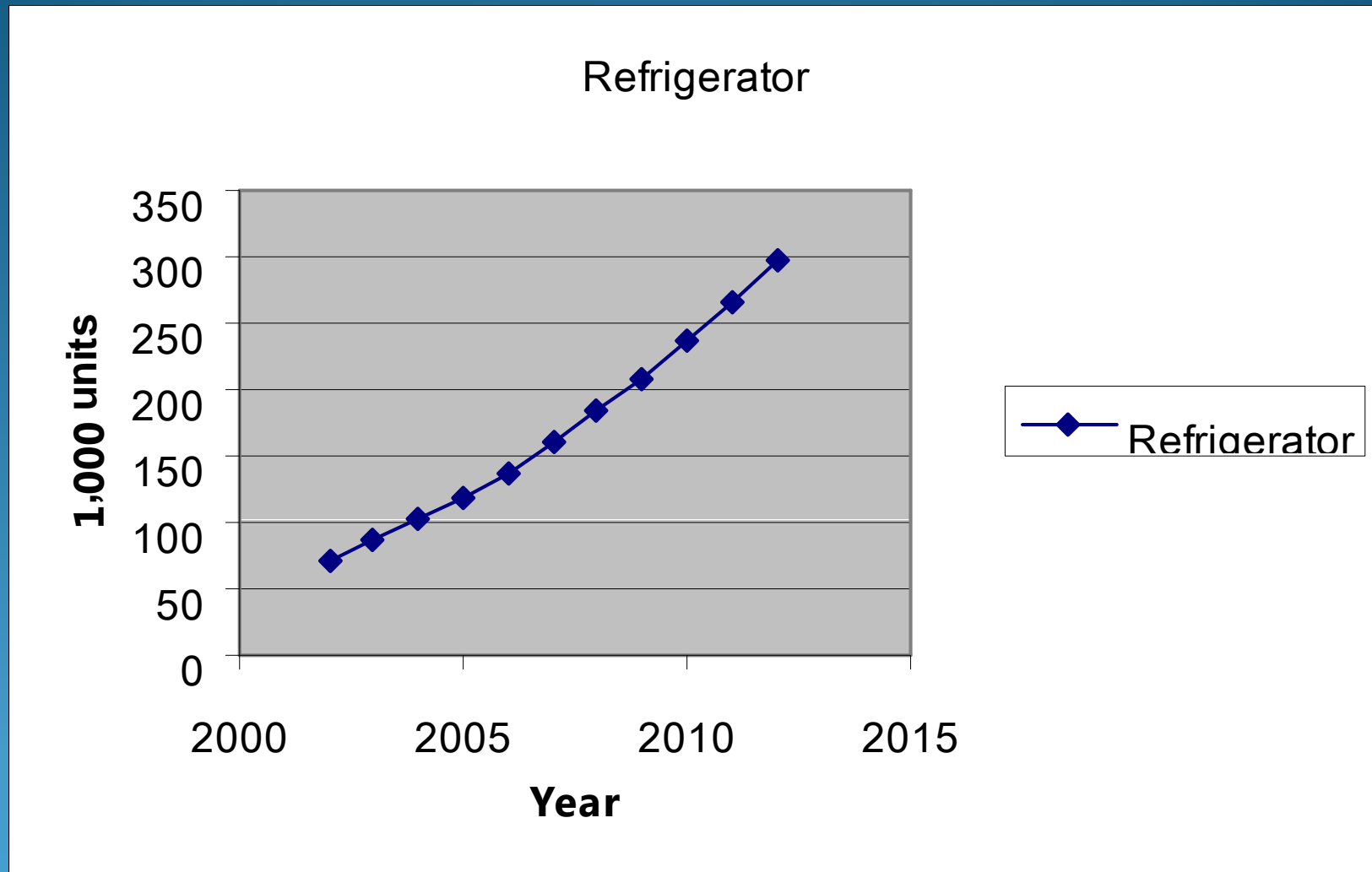
# Waste PC generation



Source: EEI, 2007

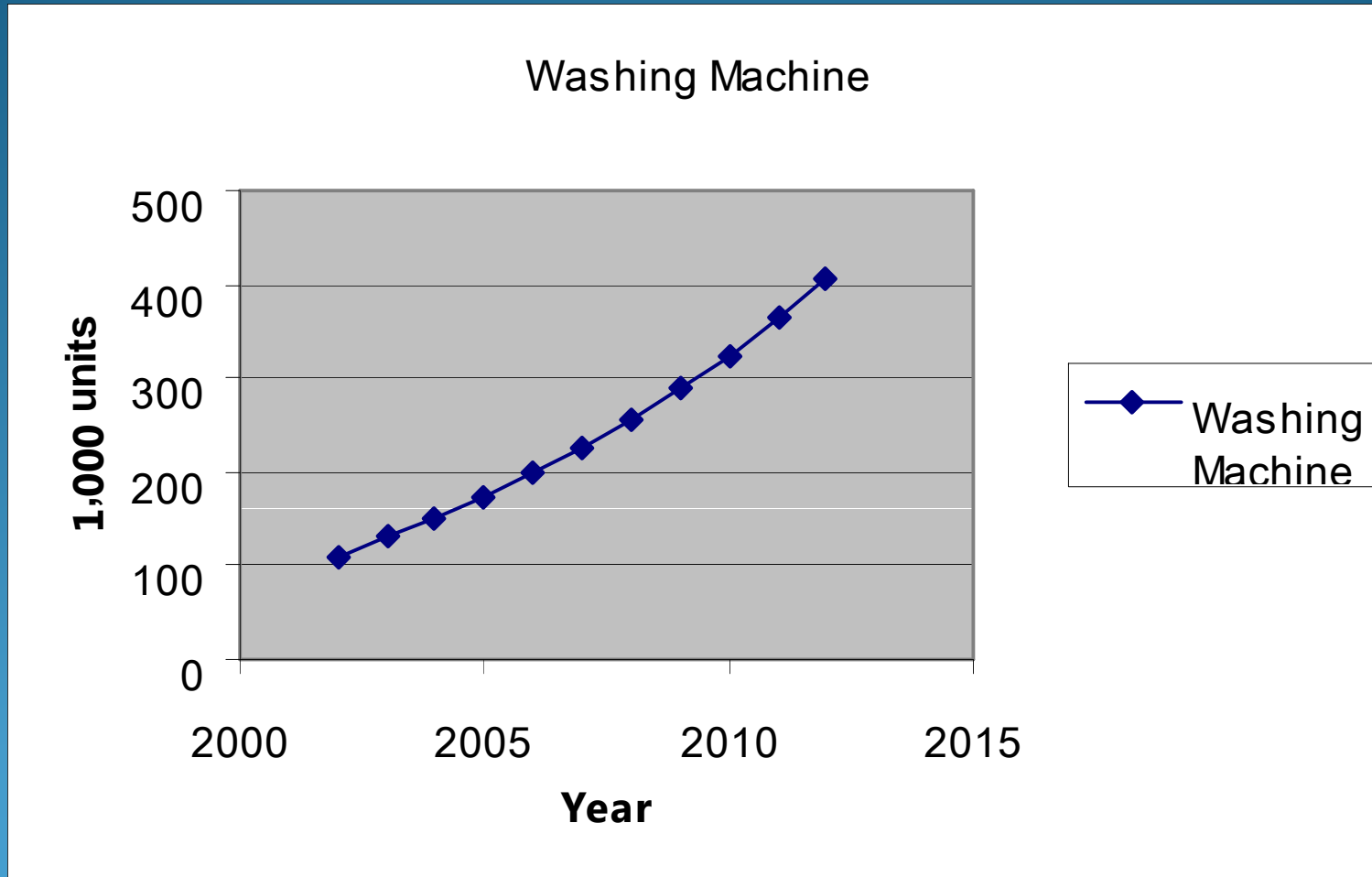


# Waste Refrigerator generation



Source: EEI, 2007

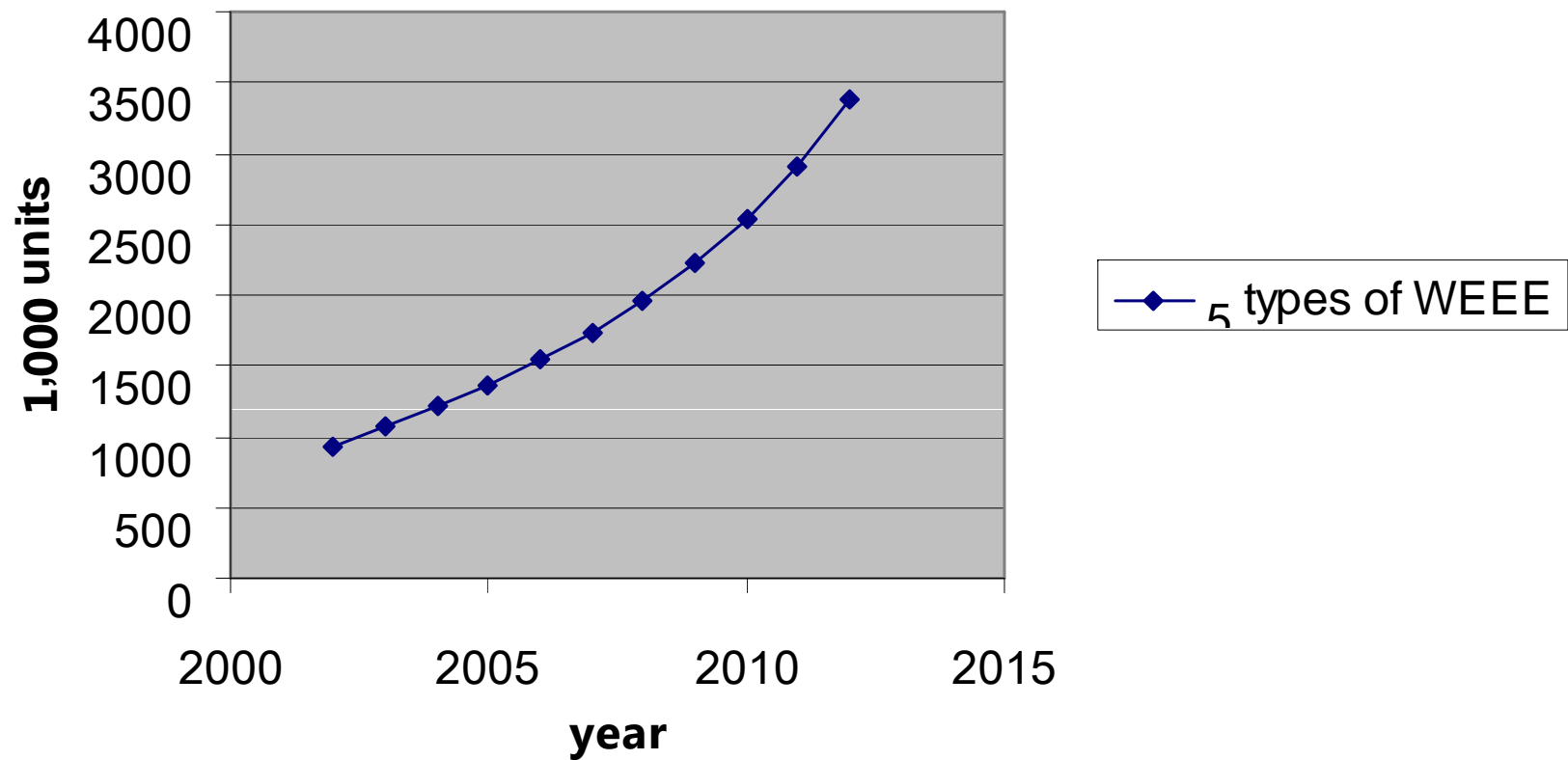
# Waste Washing Machine generation



Source: EEI, 2007

# Total Generation of 5 types

TV. PC. Refrigerator. A/C. Washing Machine



Source: EEI, 2007

# Major E-waste Problems

- Lots of junk shops, lack of good-practice facilities
- No specific laws – Public Health + Factory + Hazardous Material Acts + new laws
- Rapid increase in consumption (import and production) due to introduction of newer models and lower prices
- Nature of E-Waste
  - mixture of materials (sometimes with hazardous substances)
  - mostly generated from households, but difficult-to-treat
  - No brand products

There are more than 3,000 junk shops in Thailand.



# Key Areas to achieve ESM of E-waste

- Capacity Building:
  - Manufacturers – EcoDesign, Eco-products
  - Local Administrations – Formulate ordinance
  - Junk shops/Dismantlers/Recyclers
- Law and regulation (Legal and Financial measures)
  - Specific fund for ESM of e-waste
  - Introduce specific requirements for dismantlers/recyclers
  - Better regulate import of used EEE and E-waste
  - Improve data collection
  - Product standards
- Education/Awareness
  - Health and environmental impacts
  - Green purchasing



# Past/ongoing projects

- ESM of E-waste manual
- FL partnership program
- E-waste tracking system
- Eco-product fair
- Green camp

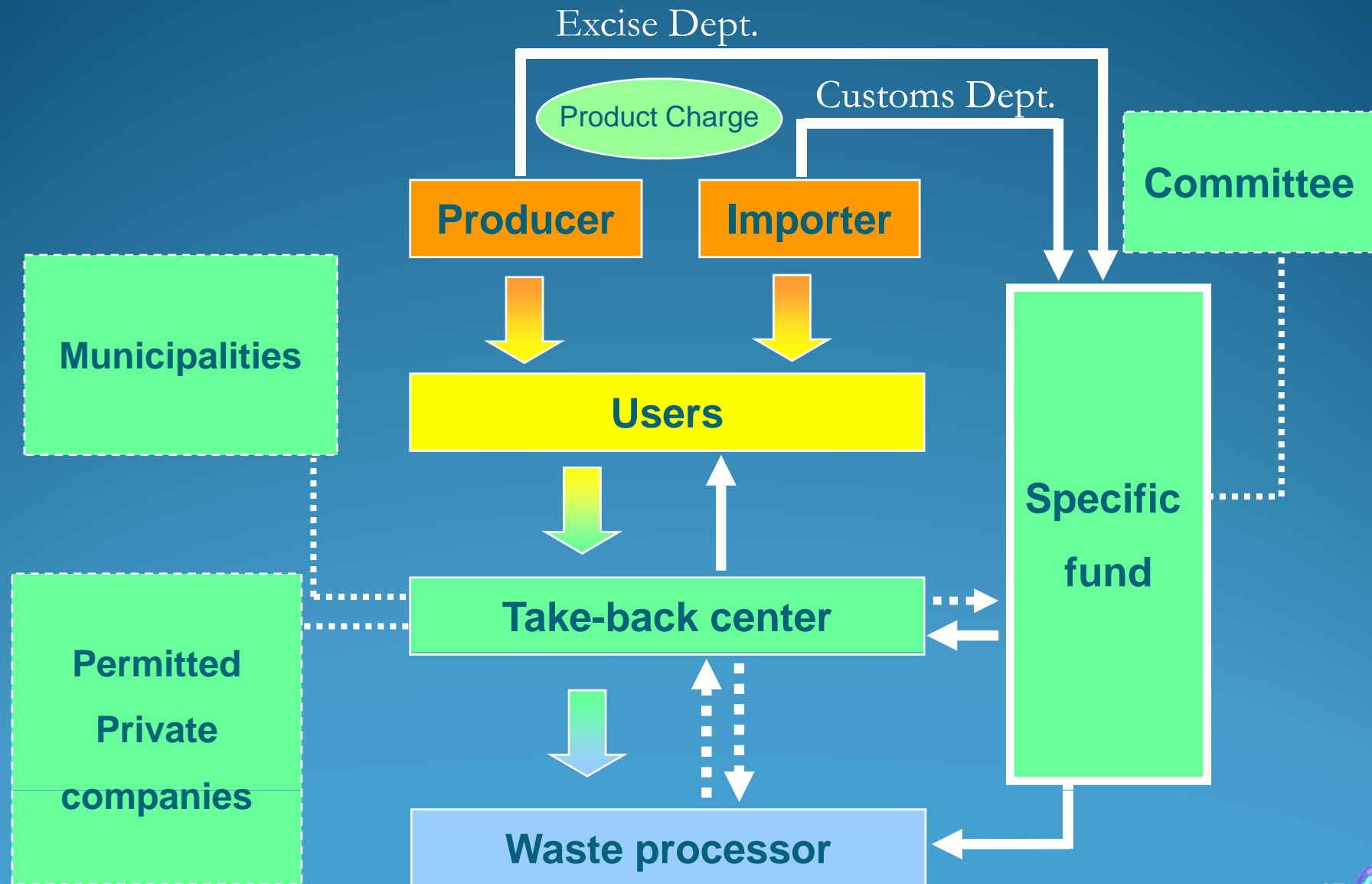


# Future/continued projects

- ESM of E-waste from government agencies
- Capacity building for junk shops and dismantlers
- Capacity building for E&E producers
- Capacity building for product testing lab (regarding new EU regulations)
- Study of E-waste management fees
- Revision of existing regulations/notifications
- E-waste take-back partnership program



# Proposed WEEE Management Scheme



# WEEE Management Laws

## •Draft Act on *Economic Instruments for Environmental Management*

- combine all the economic instruments including pollution tax, emission charge, product fee and insurance bond under one law
- Product fee is one of the tools proposed by FPO
- The Draft Act allows products to be charged a certain fee for the management of end-of-life products
- Details of the types of products to be regulated and the fee rates will be elaborated in a Royal Decree and Ministerial Notification



Thank you