

Draft Roadmap

Management of Post-Consumer Electrical and Electronic Equipment in Indonesia



**UK International
Development**

Partnership | Progress | Prosperity



KOMDIGI

Kementerian Komunikasi dan Digital
Republik Indonesia



| Post-Consumer Electronics Mandate

PP-Resolution 182 (Rev. Bucharest, 2022)

ITU Plenipotentiary Conference (PP):

Calls for an increase in the number of countries with an e-waste policy, legislation, or regulation.

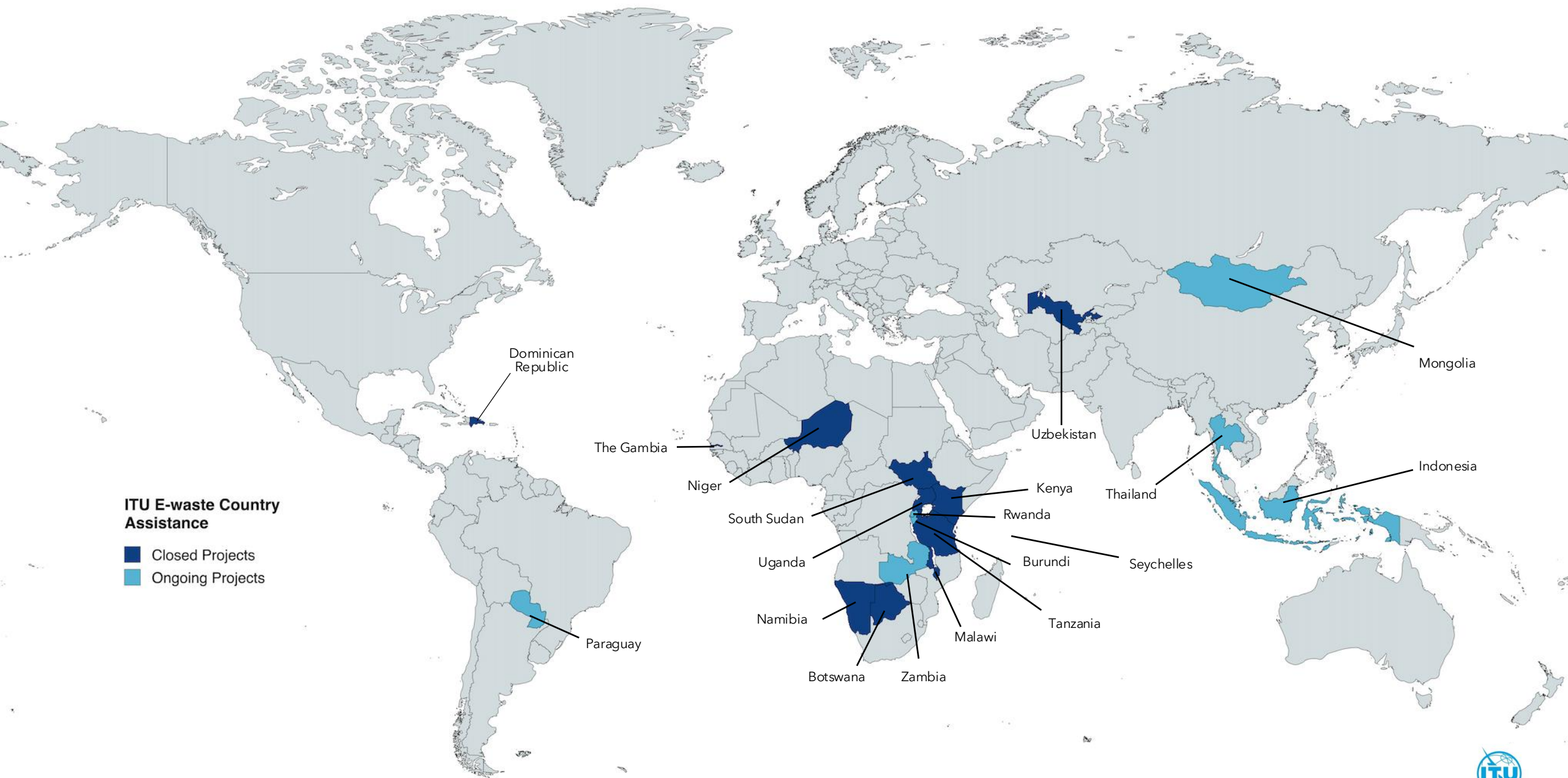
WTDC-Resolution 66 (Rev. Kigali, 2022)

ITU World Telecommunication Development Conference (WTDC):

Calls for assistance to countries in undertaking proper assessment of the magnitude of e-waste and in initiating pilot projects to achieve environmentally sound management of e-waste through e-waste collection, dismantling, refurbishing and recycling.

ITU's Strategic Target 2.5

Aims for significant improvement of ICTs' contribution to climate and environment action", with a concrete reference to the global e-waste recycling rate and the contribution of telecommunications/ICTs to global greenhouse gas emissions.



Circular economy through e-waste policy and producer action



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English



Bangkok, Thailand
04-08 Aug 2025

Apply by: 10 May 2025



For policymakers &
government officials

An introduction to e-waste policy

Training overview

Full catalogue

- By date
- By registration method
- By training type
- By topic
- By region
- By language
- By course level

LOCATION

Global or multi-regional

TRAINING TOPICS

E-Waste

TRAINING TYPE

Training course

Price
\$0.00

ENROLL FOR
FREE

TRAINING MODALITY

Online self-paced

LANGUAGES

- Arabic
- English
- French
- Spanish

EVENT MAIL CONTACT

eetmail@itu.int

Deep dive into the Extended Producer Responsibility (EPR) principle for e-waste management

Training overview

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| Session Objectives

Critique the proposal:

Would it work in Indonesia?
Is it too complex?
Should a different approach be taken?
What are the pros of the proposal?
What are the cons of the proposal?

Gather consensus:

Which elements do we all agree on?
What will and will not fly politically?
Is there an element we cannot agree on?
Where do UK, Japan, Germany align?
How do we move forward as a group?

Today's Focus

EPR System:

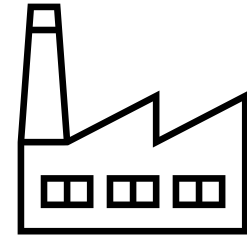
- Producer registration and permits.
- Producer obligations and tiers.
- Domestic distributors and tiers.

EEHF System:

- Product Scope.
- EEHF.
- Fund Operationalization.

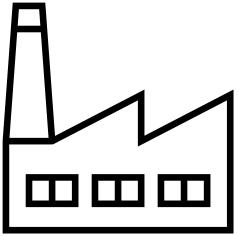
- Insights from Japanese team.
- Insights from German team.

Extended Producer Responsibility Component of the Legal Framework



- Producer Registration
- Producer Obligations
- Domestic Distributors

Overview



How do producers put EEE on the market (POM)?

- Foreign-based import (physical)
- Foreign-based import (distance sale)
- Domestic-based (locally produced)

What should EPR cover?

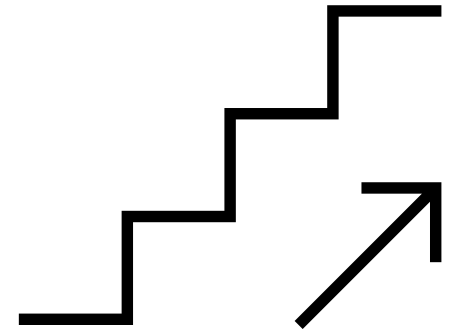
- New EEE products.
- Used EEE products.
- Both are currently POM.

First step:

- How do we define a producer?
- Where are all these producers?
- How many of them are there?

Second step:

- How do we register them?
- What procedures exist already?
- Which new ones are needed?



Where should all this information be stored?

- In a government registry for the EPR system.
- Shared among relevant government agencies.
- As integrated, efficient and digital as possible.

Other:

- How do we register old producers?
- And what about new producers?
- Ideally the procedures are different.

Importers and Domestic Producers



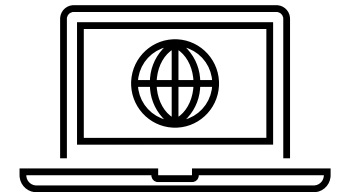
Main objective is to prevent the POM of EEE if a producer is not already in the EPR registry.

All producers should be easily identifiable in the registry, e.g. through link to the NIB system.

For new producers it should be made impossible to get a NIB if you are not already in the registry.

Information about existing producers should be provided by all relevant government agencies.

Be clear on how KBLI would be used vs. the use of HS codes in the registration of producers.

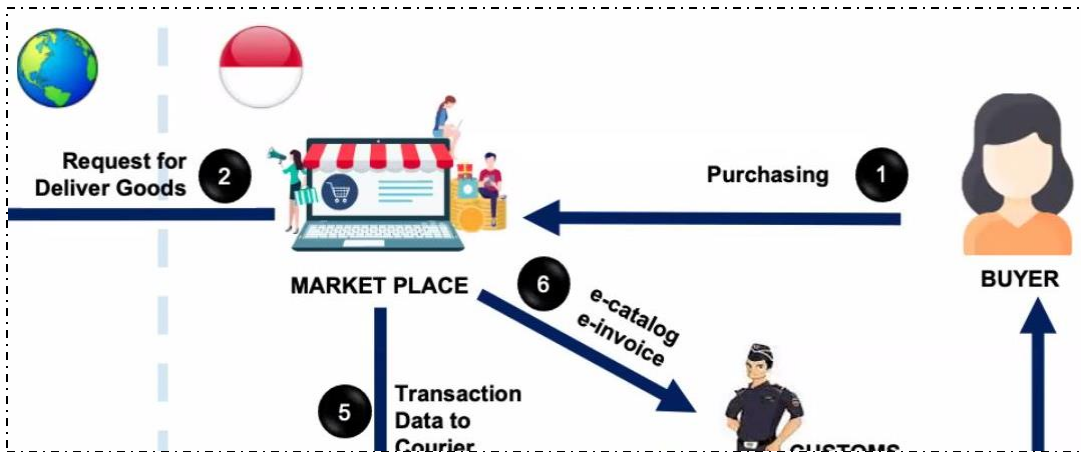


Online Distance Sellers

Online distance-sellers are “producer” free-riders in most countries and are a growing part of the market.

Proposal to define distance sellers as producers of EEE if their imports are >1000 items.

The seller should include certain info in the e-catalog and e-invoice so it can be matched with the import declaration and the appropriate EEHF can be charged at the point of import.



- No EEHF payment proof = no import.



Business Identification Number



The NIB acts as a business registration number, streamlining administrative processes and granting companies access to essential permits (such as EPR permit).

Existing Producer

- 1) You already have a NIB.
- 2) Since **your business is** associated with KBLI codes for EEE, you are made aware of new obligations.
- 3) You must fill out an application form to acquire your EPR permit.
- 4) The application is reviewed by the Ministry of Environment.
- 5) You are issued your EPR permit.

Q: how to determine in the EPR permit form whether a company is a producer?

New Producer

- 1) You must apply for a NIB.
- 2) Since **your business will be** associated with EEE KBLI codes, you are made aware of new obligations.
- 3) You must fill out an application form to acquire your EPR permit.
- 4) The application is reviewed by the Ministry of Environment.
- 5) You are issued your EPR permit.

Q: is it possible to only issue the NIB once the EPR permit is acquired?



Both processes managed through OSS.

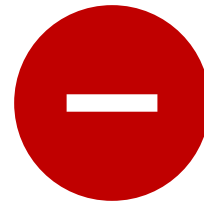


Discussion

The Proposal is for EPR registration to be done through the OSS.



PROs



CONs

Producer Tier System

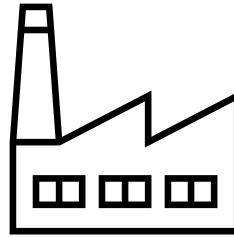


Tier 1 (e.g., > 5 tonnes per year POM).



Tier 2 (e.g., < 5 tonnes per year POM).

Different obligations exist depending on the amount of EEE your company POM each year.



- Allows for slower entry into full-fledged EPR.
- Does not penalize SMEs and entrepreneurs.
- Information to be included in the EPR permit.
- Range of POM to be provided, not exact amounts.

4 Common Obligations:

- All producers regardless of size to register through OSS.
- All producers regardless of size who POM EEE must hold a valid EPR permit.
- All producers regardless of size must provide a range of POM in the EPR registration form.
- All producers, new and existing, must mark their EEE with the standardized XX logo / marking.

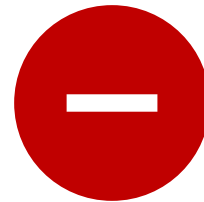


Discussion

The Proposal is for a two-Tiered system of producers based on EEE POM.



PROs



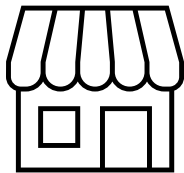
CONs

EPR Producer Permit Obligations

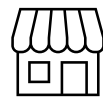
Tiers	Obligations
Tier 1	<ol style="list-style-type: none">1. Register (first EPR Registration is free of charge) with EPR system via OSS using NIB and KBLI link.2. Disclose the range (> or < 5000 tonnes / year POM) in OSS (Ministry of Environment).3. Be in possession of an EPR Permit or evidence of the EPR Registration process being underway.4. Submit EPR Management Plan in OSS (Ministry of Environment) within 60 days of receiving EPR Permit.5. Submit EPR Plan Monitoring Report via OSS (Ministry of Environment) every 12 months (always free).6. Participate in consultation on the setting of the EEHF by Provincial EEHF Schemes every XX months.7. All producers, new and existing, must mark their EEE with the standardized XX logo / marking.8. (if domestic distributor) accept e-waste from non-commercial customers, regardless of origin, for free.
Tier 2	<ol style="list-style-type: none">1. Register (first EPR Registration is free of charge) with EPR system via OSS using NIB and KBLI link.2. Disclose the range (> or < 5000 tonnes / year POM) in OSS (Ministry of Environment).3. Be in possession of an EPR Permit or evidence of the EPR Registration process being underway.4. All producers, new and existing, must mark their EEE with the standardized XX logo / marking.



Domestic Distributor Obligations



You are a domestic distributor under T1 rules if (e.g., floor space / annual sales > XX). Must join the PEEHFS for your domestic distributor take-back scheme. Must communicate the scheme to customers.



You are a domestic distributor under T2 rules if (e.g., floor space / annual sales < XX). Exempt from the domestic distributor obligations.

Tiers	Obligations
Tier 1	<div>1. Participate in a domestic distributor take-back scheme operated by your local Provincial Scheme.</div> <div>2. Accept e-waste from non-commercial customers, regardless of origin, for free.</div> <div>3. Participate in consultation on the setting of the EEHF by Provincial EEHF Schemes every XX months.</div> <div>4. Only sell EEE that is marked with the standardized XX logo / marking.</div>
Tier 2	<div>1. Only sell EEE that is marked with the standardized XX logo / marking.</div>

1 Common Obligation:

- Only sell EEE that is marked with the standardized XX logo / marking.



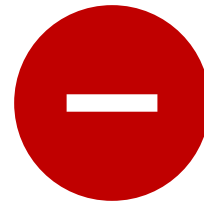


Discussion

The Proposal is for producers to assume mostly “organisational” responsibilities.

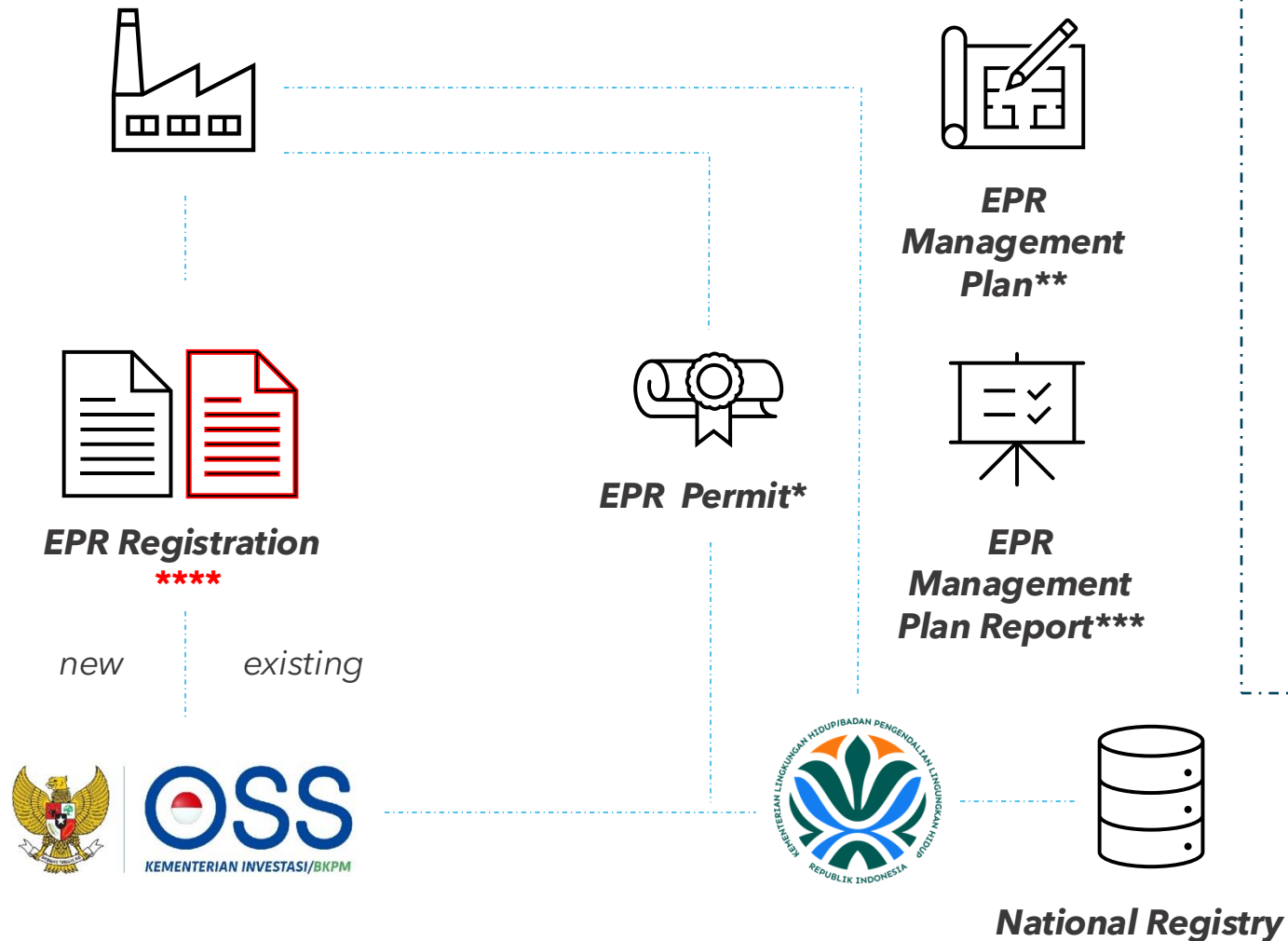


PROs



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Process Flow



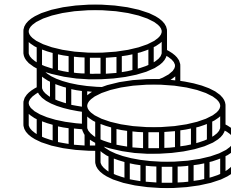
**Valid only for the period of EPR Registration (24 months).*

Valid for max one year, submitted twice per permit period (once per 12 months). **Currently every 10 years.

****Reporting on progress with plan implementation. Opportunity to introduce new initiatives to the plan.*

*****Required at the end of the permit period (every 24 months). First registration free for all producers. Fee starting from second registration for T1 producers. Registration remains free for T2 producers, T2 domestic distributors and T1 distributors who are not producers.*

EEE Environmental Handling Fee Component of the Legal Framework



- Product Scope
- EEHF
- Fund Operationalization

| Background

- Provincial-level responses can better accommodate Indonesia's diverse geography and cost variations.
- Strong provincial governance can help localize e-waste challenges and tailor solutions effectively.
- Indonesian industry (producers) are split between imported POM and locally POM so typical nationwide EPR might be more complex.
- A greater willingness to share costs between producers and consumers can create a more balanced system, while also integrating retailers (distributors), who are typically excluded under traditional EPR models like in the EU.

| Main Components

Product Scope



EEHF



Fund Operationalisation

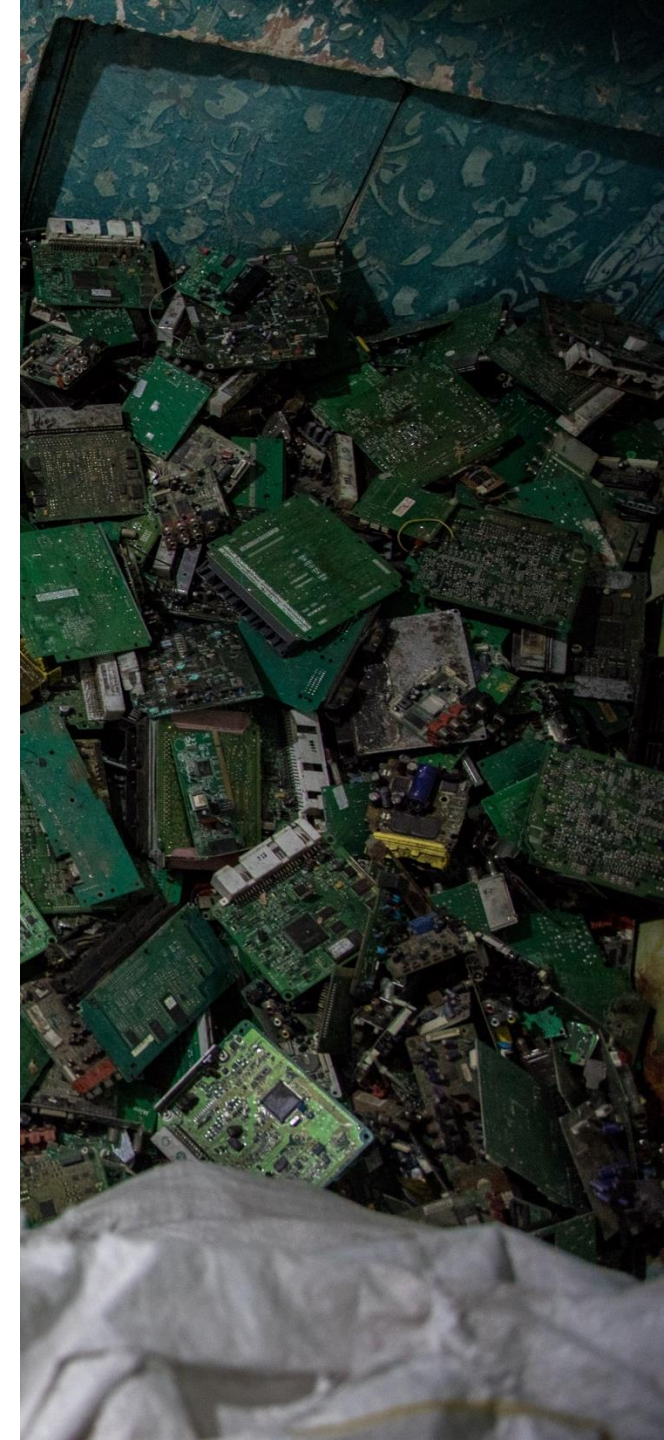
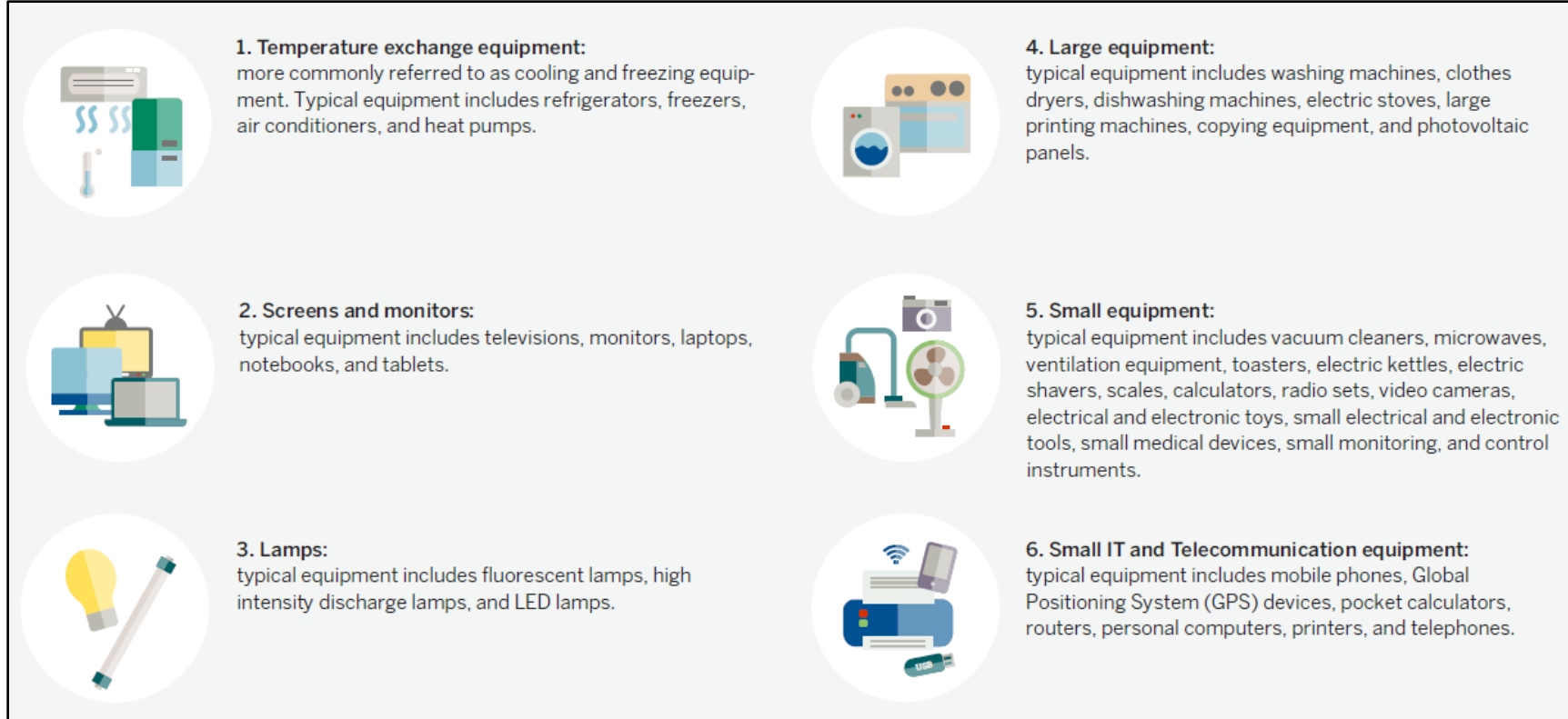


Product Scope

| Proposed Product Scope

Scope of EEE products is important for the post-consumer management system:

- What products are being regulated Environmental Handling Fee system?
- Producers of which EEE products are subject to the EPR system?
- How do consumer-phase EEE categories translate to post-consumer (e-waste) phase?



| Proposed Product Scope Modifications

The Indonesian regulatory system for e-waste appears to be designed mainly around catering for hazardous waste. However, as well as being hazardous, e-waste is a special waste stream. Under certain conditions it is not hazardous. The regulatory system currently lacks the definition of product scope. This is essential for EPR and for installing a fee system of any type. New and used EEE product scope must be aligned with the e-waste scope.

- 1. The system could be simplified for Sampah (usable waste before recycling facility) and Limbah (unusable waste after recycling facility).** The current set up is likely to be increasing informal sector activity since to transport Sampah there is no requirement to have certain permits.
2. Importation of second-hand EEE is granted by the Ministry of Trade. **All second-hand EEE should be subject to the EPR system and the environmental handling fee in the same way.**
3. E-waste from EEE products is defined in B107d (electronic waste includes cathode ray tubes, fluorescent lamps, printed circuit boards, and metal wires) in Regulation 22 (Environmental Protection and Management, 2021). A102d (used batteries). **Categorization and definition could be aligned with EEE products.**
4. E-waste from EEE products is also defined in Article 5 of Law No. 27 of 2020. The list appears to be non-exhaustive and focusses on products (like personal computers, DVD players etc.) whereas in Regulation 22 the focus is on components. **Alignment with B107d and A102d needed and more complete scoping.**
- 5. Clarity whether used batteries are part of the post-consumer management system for EEE products.**

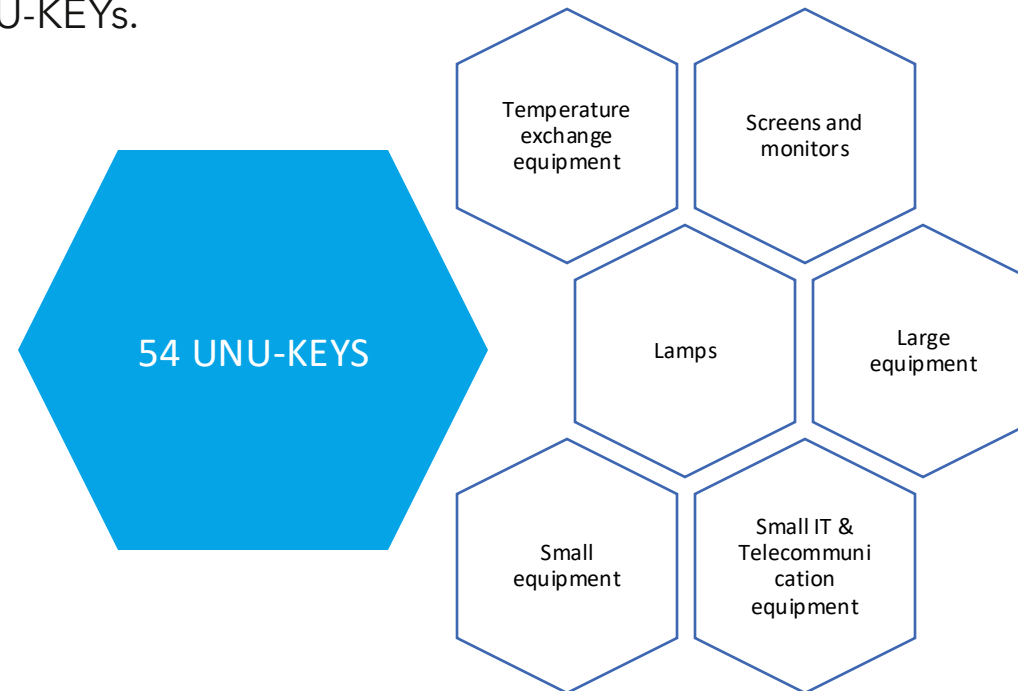
| Proposed Product Scope Modifications

- The current product classification may not be fully aligned with the methodology for establishing an Environmental Handling Fee (EHF).
- The inclusion of individual components within the classification could lead to inconsistencies, as the **fee should be determined based on the entire product rather than its separate parts.**
- To ensure a clear and effective fee structure, it is important to classify products in a way that reflects their complete lifecycle impact and aligns with EHF application criteria.
- Naming specific products as a whole under the scheme makes it easier for communications with consumers. They know what a PC is but possibly not its different parts.



EEE Classification

- EEE comprises of a large variety of products.
- The E-waste Statistics Guidelines on Classification Reporting and Indicators – Second Edition divides EEE into 54 different product-centric categories. The categorization is referred to as the UNU-KEYs.

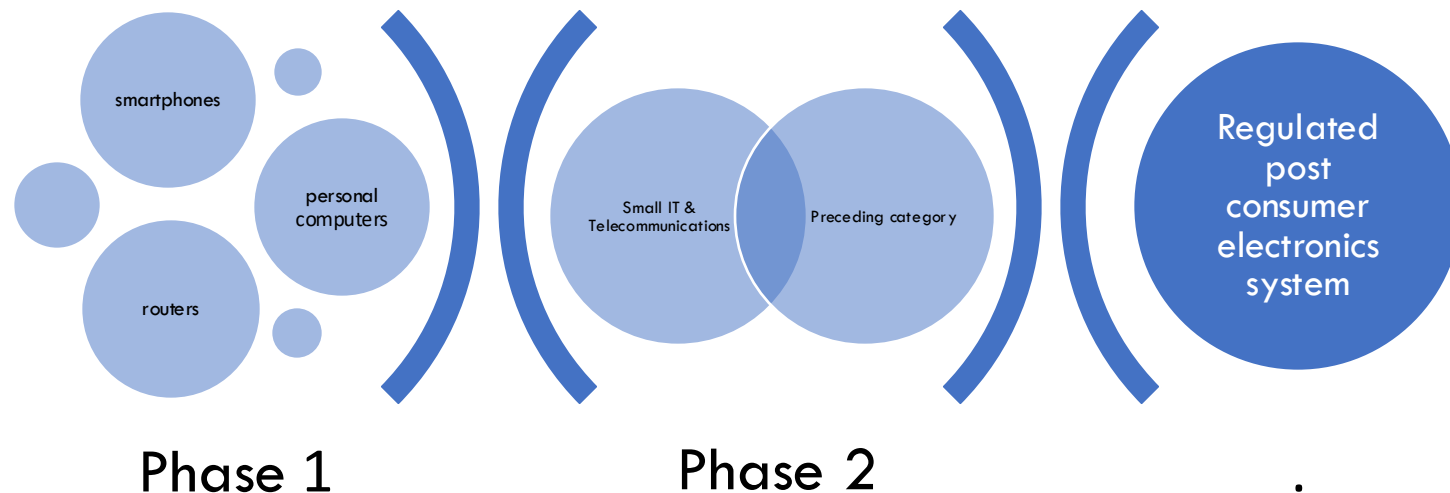


- The 54 EEE product categories are grouped into six general categories that correspond closely to their waste management characteristics.

UNU Key	Description
0001	Central Heating (household installed)
0002	Photovoltaic Panels (incl. converters)
0101	Professional Heating & Ventilation (excl. cooling equipment)
0102	Dishwashers
0103	Kitchen (f.i. large furnaces, ovens, cooking equipment)
0104	Washing Machines (incl. combined dryers)
0105	Dryers (wash dryers, centrifuges)
0106	Household Heating & Ventilation (f.i. hoods, ventilators, space heaters)
0108	Fridges (incl. combi-fridges)
0109	Freezers
0111	Air Conditioners (household installed and portable)
0112	Other Cooling (f.i. dehumidifiers, heat pump dryers)
0113	Professional Cooling (f.i. large air conditioners, cooling displays)
0114	Microwaves (incl. combined, excl. grills)
0201	Other Small Household (f.i. small ventilators, irons, clocks, adapters)
0202	Food (f.i. toaster, grills, food processing, frying pans)
0203	Hot Water (f.i. coffee, tea, water cookers)
0204	Vacuum Cleaners (excl. professional)
0205	Personal Care (f.i. toothbrushes, hair dryers, razors)
0301	Small IT (f.i. routers, mice, keyboards, external drives & accessories)
0302	Desktop PCs (excl. monitors, accessories)
0303	Laptops (incl. tablets)
0304	Printers (f.i. scanners, multifunctionals, faxes)
0305	Telecom (f.i. cordless phones, answering machines)
0306	Mobile Phones (incl. smartphones, pagers)
0307	Professional IT (f.i. servers, routers, data storage, copiers)
0308	Cathode Ray Tube Monitors
0309	Flat Display Panel Monitors (LCD, LED)
0401	Small Consumer Electronics (f.i. headphones, remote controls)
0402	Portable Audio & Video (f.i. MP3, e-readers, car navigation)
0403	Music Instruments, Radio, HiFi (incl. audio sets)
0404	Video (f.i. Video recorders, DVD, Blu-Ray, set-top boxes)
0405	Speakers
0406	Cameras (f.i. camcorders, photo & digital still cameras)
0407	Cathode Ray Tube TVs
0408	Flat Display Panel TVs (LCD, LED, Plasma)
0501	Lamps (f.i. pocket, Christmas, excl. LED & incandescent)
0502	Compact Fluorescent Lamps (incl. retrofit & non-retrofit)
0503	Straight Tube Fluorescent Lamps
0504	Special Lamps (f.i. professional mercury, high & low pressure sodium)
0505	LED Lamps (incl. retrofit LED lamps & household LED luminaires)
0506	Household Luminaires (incl. household incandescent fittings)
0507	Professional Luminaires (offices, public space, industry)
0601	Household Tools (f.i. drills, saws, high-pressure cleaners, lawn mowers)
0602	Professional Tools (f.i. for welding, soldering, milling)
0701	Toys (f.i. car racing sets, electric trains, music toys, biking computers)
0702	Game Consoles
0703	Leisure (f.i. large exercise, sports equipment)
0801	Household Medical (f.i. thermometers, blood pressure meters)
0802	Professional Medical (f.i. hospital, dentist, diagnostics)
0901	Household Monitoring & Control (alarm, heat, smoke, excl. screens)
0902	Professional Monitoring & Control (f.i. laboratory, control panels)
1001	Non-Cooled Dispensers (f.i. for vending, hot drinks, tickets, money)
1002	Cooled Dispensers (f.i. for vending, cold drinks)

| Phased approach

- The proposal is to adopt a phased approach to implementation.
- The initial phase will focus on product categories classified under the small IT and telecommunication equipment category.
- This could allow for the establishment of regulatory frameworks, infrastructure, and operational mechanisms in a controlled and manageable manner.
- Once this system is effectively set up and key learnings are gathered, the approach will be expanded to include the next most critical product category based on priority assessments.
- This stepwise progression ensures a smoother transition, minimizes risks, and enables continuous improvement through lessons learned in each phase.



Environmental Handling Fee

The Environmental Handling Fee (EHF) is typically a small percentage of the product price, varying based on product type and recycling costs. It is not a tax nor is it a deposit > goes to a not-for profit entity providing a reliable and convenient e-waste collection network.

Generally, it falls within the range of 1% to 5% of the electronic product's retail price.

Examples from different countries:

- Switzerland: 2-5% ARF, based on weight and type (managed by SWICO/SENS).
- Canada (varies by province): \$1 to \$50 per item, depending on the product and province.
- California (USA): \$4 to \$10 per device for screens larger than 4 inches.

Product Category	Typical EHF (% of Product Price)	Examples of Fixed Fees
Small Electronics (phones, chargers)	1% - 3%	\$1 - \$5
Laptops & Tablets	2% - 4%	\$5 - \$20
Monitors & TVs	3% - 5%	\$10 - \$50
Large Appliances	2% - 5%	\$20 - \$100
Batteries & Light Bulbs	1% - 3%	\$0.50 - \$5

| Technical Costs

What is it?

It reflects the cost of the recycling of the product when purchased. These are called “technical costs”, including:



Access to waste - cost or revenues associated with accessing e-waste from the consumers.



Collection - cost of purchase and maintenance etc. of the collection network and infrastructure.



Cost of **transportation** from collection points or consumers to transfer sites and treatment facilities.



Costs for proper **treatment** but also revenues from the sale of materials on the secondary market.

| Framework Costs

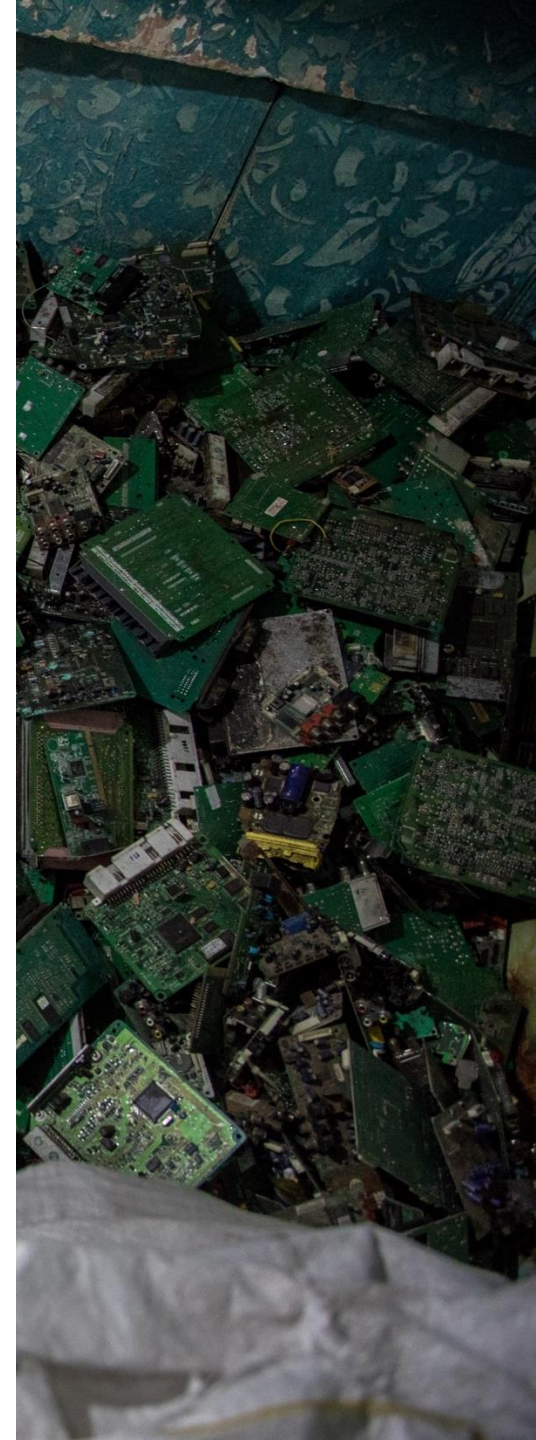
What is it?

It reflects the cost of the administrative system such as:

- Program administration
- Enforcement
- Auditing and standards
- Awareness raising
- Operating contingency reserves
- Research and development

Framework costs for **harmonization** of the system would be important in the case of Indonesia – since this proposal focusses on provincial schemes.

The proposal is **not** to include the “**framework costs**” in the EEE Environmental Handling Fee.



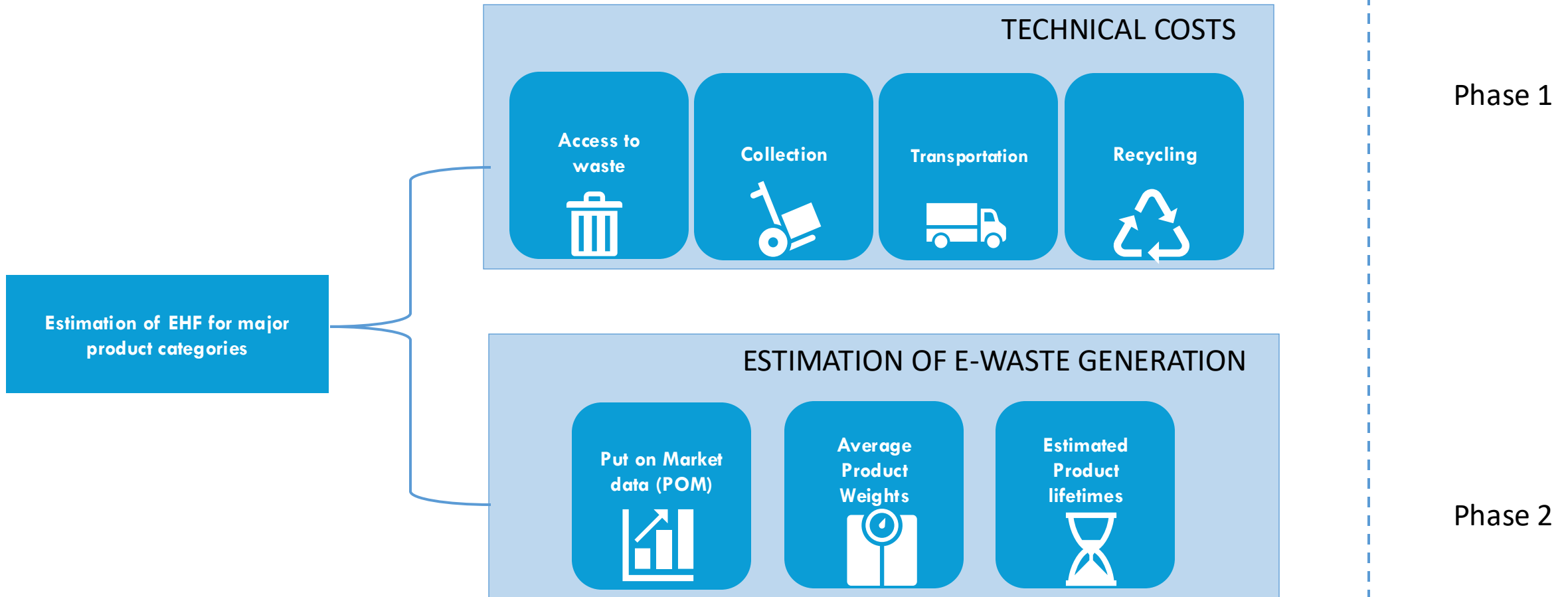
| Separation of Cost Contributions

Consumers pay a
EEE Environmental
Handling Fee upon
purchase



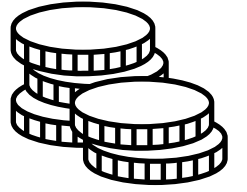
1. Producers pay an EPR Registration Fee after the first permit period
2. Online distance-sellers pay an EPR Fee at the point of import.
3. Penalties from non-compliance.

| EHF Calculation Methodology

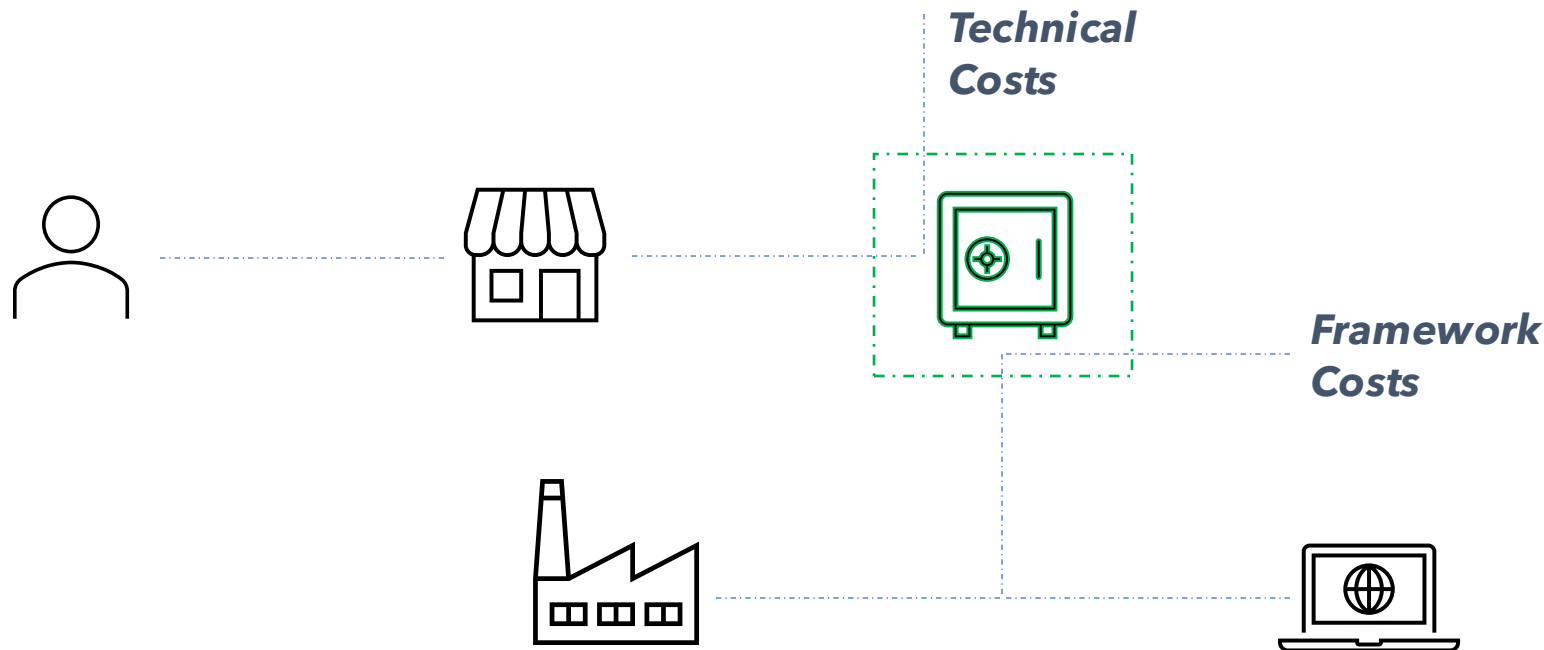


Fund Operationalization

Overview



- Domestic distributor to display fee separately on receipt.
- Fee paid by consumer, but fee rate set at provincial level by each participating province.
- Set through consultation with provincial distributors, BPD LH, provincial government, recyclers, producers.
- Fee rate is revised every XX years.
- BPD LH manages the funds, and the technical costs are operationalized at the provincial level.
- Producers remit the fee collected to the BPD LH on quarterly / half yearly basis.
- Each **Provincial EEE Environmental Handling Fee Scheme (PEEHFS)** oversees operationalization of the fees.



Technical Costs (EEHF)	Framework Costs (EPR Fee)
Who pays?	Who pays?
Consumers provincially.	Producers nationally.
	Online-distance sellers nationally.
	Penalties from non-compliance.

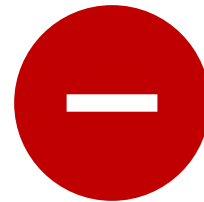


Discussion

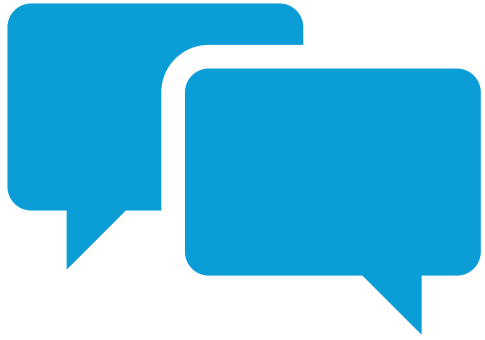
The Proposal is for an EHF to be paid upon purchase of EEE rather than an EPR fee to be paid by producers upon import /POM of EEE.



PROs



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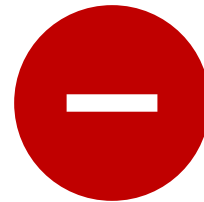


Discussion

The Proposal is for the schemes to be managed at provincial level.



PROs



CONs

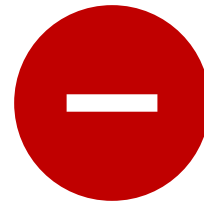


Discussion

The Proposal is for the funds to be managed by the BPD LH for technical costs at the provincial level and the framework costs at the national and the provincial levels.



PROs



CONs

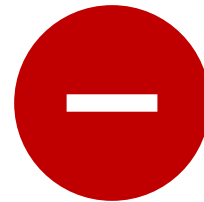


Discussion

The EEHF is visible rather than inbuilt.

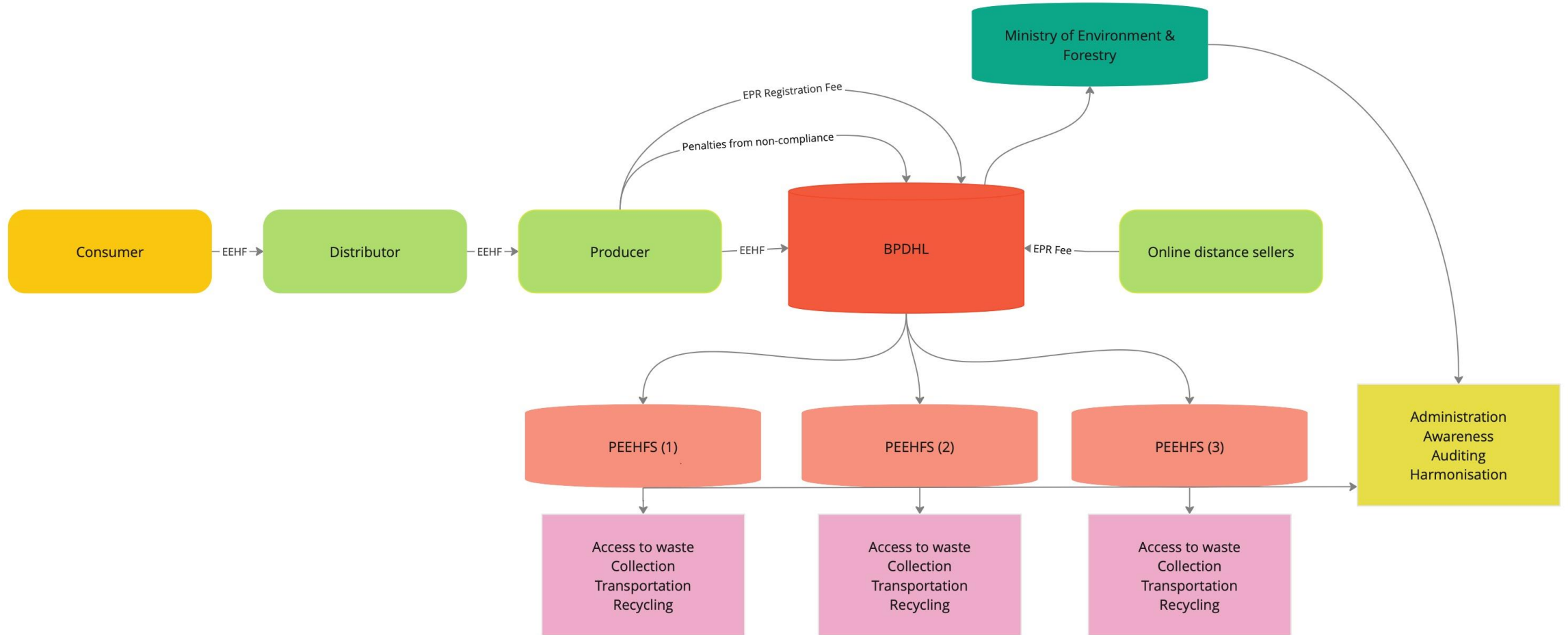


PROs



CONs

Financial flows



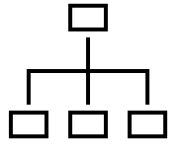
- Operates as a not-for-profit entity.
- Ensures e-waste is only processed by certified recyclers > national certification to be developed
- The scheme pays for the collection, transportation and recycling of the post consumer electronics.
- These services are provided through contracts with various suppliers > Transportation, consolidation and recycling services are typically awarded via a competitive bid process while collection services are compensated on a per tonne rate that is reviewed on a regular basis.





Other Matters

It would be the obligation of the Provincial EEE Environmental Handling Fee Scheme (PEEHFS) to run campaigns to collaborate and integrate the informal e-waste system into the post-consumer EEE management system.



Informal sector collaboration would be a cost component of the framework costs, hence driven nationally by the government's policy on this matter.

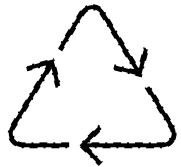
Government Consumption

Government is the largest EEE (bulk) consumer in many countries. Hence the government procurement and IT asset disposition rules can play a big role in the way old and end-of-life EEE from government is dealt with.

| Auditing and Reporting Examples



A comprehensive system of auditing and reporting will be essential since there will be new obligations for different stakeholders, hence new procedures created whilst also an abundance of data being generated. The following could be digitized / templates:



Contracts between scheme and recycling companies. Reporting by the recycling company to the scheme on how they have spent the money, against targets (if any). Typically, on a quarterly reporting basis.

E.g. certificate of all e-waste received and treated by the recycling company each quarter. And costs for all e-waste received and treated each quarter. And information on all e-waste received and / or treated from imports and exports each quarter. Recycling companies to be audited by a third party once per year.



Report by scheme to BPDH and Ministry of Environment on the use of funds accrued through the technical and framework costs allocation, for the purpose of tackling e-waste. Typically, on a quarterly reporting basis

THANK YOU

Draft Roadmap

Management of Post-Consumer Electrical and
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