

Manual on Steps to Establish and Implement Environmentally Sound Management for Used and Waste Computing Equipment

*OEWG 10 Meeting Side Event
31 May 2016, Nairobi, Kenya*

Joachim Wuttke
Federal Environment Agency, Germany
on behalf of PACE Working Groups 1.1 and 2.1

Manual on Steps to ESM

The purpose of this manual is to provide *governments* and *companies* with an overview of the essential elements to establish, maintain and strengthen the environmentally sound management (ESM) of used and waste computing equipment being collected, refurbished, repaired, recycled, and recovered.

Manual on Steps to ESM

The manual outlines practical steps necessary at the national level to establish and implement ESM for used and waste computing equipment.

ESM can ultimately only be achieved when any sector, including the informal sector, complies with all applicable legislation, requirements and standards.

5 Steps to establish and implement ESM

What do we have ?

What does exist
elsewhere ?



Let's act !

What are the gaps ?

What do we want ?

Five steps for GOVERNMENTS:

Step 1: Assess the current realities at national level



Step 2: Collect existing information

Step 3: Identify gaps and needs

Step 4: Define relevant needs and priorities

Step 5: Implement activities

Five steps for GOVERNMENTS:

1

Assess the current realities at national level

Assess the current realities related to used and waste computing equipment to get a national overview of the situation in your country, including baseline estimates of e-waste flows and practices in order to have all the important elements from a government's perspective to build an action plan / strategy.

Step 1:

National and/or state or provincial legislative and regulative review

National legislative context:

Does national and/or state or provincial legislation exist for solid and hazardous waste management in your country?

Does it cover used and waste computing equipment?

Are there any other pre-existing national laws and regulations that may be applicable to the various aspects of the ESM of used and waste computing equipment?

Are there any related laws at the state or provincial level?

Are national and sub national laws being enforced?

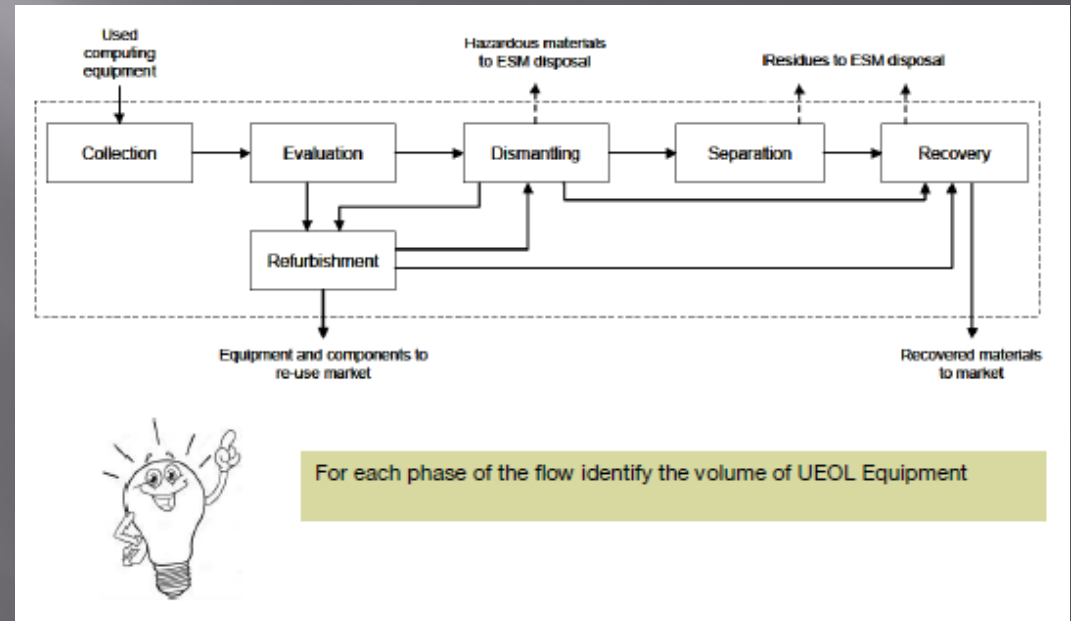
Does any international or national technical directive on ESM of used and waste computing equipment exist?

Does the country use any international standard or indicators to assess their used and waste computing equipment management techniques?

Does the country implement any international standards to assist with the recovery of rare, strategic and precious metals from used and waste computing equipment?

Step 1:

- National and/or state or provincial legislative and regulative review
- Stakeholder identification
- Estimating volumes of used and waste computing equipment



- Technical ability
- Collection
- Public awareness
- Financing aspects
- Project activities
- Others

Five steps for GOVERNMENTS:

2

Collect existing information

Provide information and examples about existing laws, regulations and guidelines concerning ESM of used and waste computing equipment to develop/improve national legislation based on the step 1 assessment.

3

Identify gaps and needs

Identify gaps between existing realities and national needs for an effective approach to managing used and waste computing equipment in an environmentally sound manner.

4

Define relevant needs and priorities

Define the priorities based on the gaps and needs identified in step 3 and to provide examples of tools.

5

Implement activities

Define a roadmap and/or a national action plan on ESM of used and waste computing equipment in order to implement the activities listed in step 4.

Depending on the situation in the country, the following outcomes should be achieved:

- ✓ Establish a coordinating mechanism and organization process;
- ✓ Set goals, national objectives and reduction targets;
- ✓ Formulate an implementation plan;
- ✓ Implement the roadmap and/or the national action plan on ESM of used and waste computing equipment;
- ✓ Develop a monitoring and evaluation mechanism for the plan.

Five steps for the PRIVATE SECTOR:

Step 1: Assess the current situation in
your country

Step 2: Collect existing information

Step 3: Assess the situation for
establishing a business

Step 4: Define relevant needs and
priorities

Step 5: Implement activities



Five steps for the PRIVATE SECTOR:

1

Assess the current situation in your country

Get an overview of the situation in your country regarding the ESM of computing equipment, including baseline estimates of e-waste flow and practices, financial aspects, technical ability and relevant stakeholders in order to have all the important elements to build a business strategy.

2

Collect existing information

Identify and assess existing laws, regulations and guidelines that must be complied with concerning the ESM of used and waste computing equipment. Additionally, international agreements should be identified that address used and waste computing equipment management.

Five steps for the PRIVATE SECTOR:

3

Assess the situation for establishing a business

Provide guidance to assess the situation for establishing a business based on information gathered in step 1 and step 2.

- Establishing a business
- Commercial considerations
- Technical considerations
- Financial considerations
- Monitoring and control
- Capacity building for compliance

4

Define relevant needs and priorities

Identify the various gaps that exist in step 3. Based on the assessment, establish priorities to move forward to launch the business based on:

- ✓ Material and financing flow analysis;
- ✓ Used and waste computing equipment inventory and assessment;
- ✓ Actual types of management of used and waste computing equipment at recycling and refurbishment facilities compared to ESM at each facility.

5

Implement activities

Define a roadmap to establish a business on ESM of used and waste computing equipment on the basis of the assessment in step 3 and in order to take action to bridge the prioritised gaps as identified in step 4.

The identified gaps will differ case by case depending on the situation in the country and the interest of the company(ies).

Manual on Steps to ESM

Appendix: Examples of international conventions, regional agreements and national legislations and other regulatory frameworks

- International conventions and regional agreements

Basel Convention	http://www.basel.int/
Stockholm Convention	http://chm.pops.int/
Rotterdam Convention	http://www.pic.int/
Regional Agreements regarding transboundary movements (export, import, transit) of used and waste computing equipment	<p>Waigani Treaty: Bans the exporting of hazardous or radioactive waste to and from Pacific Islands Forum countries</p> <p>Bamako Convention: Treaty of African nations prohibiting the import of any hazardous wastes (including radioactive)</p> <p>Izmir Protocol: Protocol on the Prevention of Pollution of the Mediterranean Sea by Transboundary Movements of Hazardous Wastes and their Disposal</p> <p>Central American Accord: Regional agreement to control the trans-boundary movement of hazardous wastes and prevent the illegal traffic and disposal of such wastes in Central America</p>

- Legislation on ESM of used and waste computing equipment

...

- Technical guidelines, guidance documents and technical directives

...

- Additional resources and examples

...



THANK YOU!