



Development of Waste Electric and Electronic Equipment Best Practice Guides and Electronic Information Platform to Enhance Recycling Management Operations

Project Guide



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Introduction and background to the project

Hong Kong's economy is now in recession and the business environment is very difficult. All industries are facing similar difficulties, and the recycling industry is not immune to them. Additionally, China's restriction on the import of waste and the implementation of the revised "Basel Convention" in 2021 have posed challenges to Hong Kong's recycling industry. The operational performance of the recycling of waste electrical and electronic equipment (WEEE), which contains toxic waste, is a concern and needs to be upgraded to international standards. However, the standard of recycling operators varies greatly, and there is a wide range of cultural standards. It is difficult for general operators to understand the relevant standards.

In terms of information flow in the recycling industry, the traditional recycling industry generally exchanges information between operators at chamber of commerce events. The industry lacks a convenient and fast communication channel for operators to receive market information quickly and accurately.

The project aims to i) Enhance the operational performance and quality of the WEEE recycling industry through the development of a set of best practice guides and provision of related workshops that incorporate international standards and cater the needs of the local industry. Improved quality will certainly lead to enhanced core competitiveness and strengthen their competitiveness on the international stage. ii) To establish an electronic information platform for the recycling industry to provide a convenient and direct communication channel to improve the efficiency and accuracy of information flow in the industry, in the long-term interests of Hong Kong's environmental cause.



The implementation and promotion plan of this project is as follows:

1. Formulate best practice guides on the recycling of WEEE

The “Waste Electrical and Electronic Equipment (WEEE) Recycling Best Practice Guides” (Best Practice Guides) provide a set of guidelines for the recycling of WEEE. Through in-depth research on the experience sharing of different WEEE recyclers, it can help potential service purchasers (customers) to make informed decisions and further ensure that used and expired electronic equipment is managed in an environmentally responsible manner to protect the health and safety of workers and the public, and that all data on all media equipment is safe until destroyed. As a result, WEEE recyclers are able to demonstrate their value to customers, employees, their communities and the general public.

2. Workshop on Recycling of WEEE

In order to facilitate recycling practitioners to better grasp and understand the content of the Guidelines, we organized four workshops on the Guidelines. Upon completion of one of the workshops, the representative of the WEEE recycler will be awarded a certificate of completion, which will enhance the overall quality, quality awareness and operational standards of the recycler and improve its efficiency, thereby strengthening the core competitiveness of the recycling industry in Hong Kong. Details of the proposal are set out below:

Target Audience: Management and personnel engaged in the disposal of WEEE products

Duration: About 3 hours per workshop

Class size: About 30 people

Language: Cantonese



Date:

Session 1

July 27, 2023 (Thursday)



Session 2

28 July 2023 (Friday)



Session 3

3 August 2023 (Thursday)



Session 4

4 August 2023 (Friday)



3. Establish an electronic information platform

Through this project, we have established an electronic information platform for the recycling industry. To provide more communication channels and improve the efficiency and accuracy of information flow in the industry, for the long-term interests of Hong Kong's environmental cause. We expect that the beneficiaries of this platform will not be limited to e-waste recyclers, but also the recycling industry as a whole and other stakeholders. Recyclers are required to register an account in advance before usage, and after verification and approval by the technical consultant, the recycler will be issued an account to log in to the platform. Recyclers can choose to receive different types of information (e.g. metals, plastics, regional legal updates, etc.) according to their needs.

The framework of the information platform is designed as follows:



i) Information platform features

a. Release of Information

I. Industry information

In view of the abundance of information on the Internet around the world every day, the electronic information platform will apply intelligent analysis functions to pre-search information related to the recycling industry in Hong Kong, Mainland China and around the world (e.g. market news, EPD latest news, updates on relevant laws and regulations in Mainland China, etc.) for platform administrators to screen. The platform administrator evaluates whether the unfiltered information is valuable for publishing and publishes it to the platform according to the type of information.



II. Case sharing

According to our experience, there will be a large number of relevant laws and regulations, import and export enquiries (e.g. Mainland import and export standards and procedures, including logistics, customs declaration, customs clearance and other documents required) and in the daily operations of the recycling industry (e.g. enquiries on emergencies related to the industry). Currently, it is the traditional practice of the recycling industry to seek assistance from the chamber of commerce, and then the chamber will respond to the relevant enquiries on a point-to-point basis, so the flow of information has not been achieved. In response to the above issues, the technical consultant will receive and answer the enquiries of the recycling industry on one hand, and follow up on them afterwards, and on the other hand, integrate the cases and upload them to the information platform, so that other recyclers can find solutions from the information platform when they encounter similar problems in the future.

市場資訊

交易所

全部LMECOMEX其他

交易種類

全部銅鋁鋅鉛鋅錫不銹鋼鐵錫錫寶貴金屬銀其他

更新時間順序

發佈時間	交易所	交易種類	報價
2023-05-11 11:08	LME	鋁	2269.00美元/公噸
2023-05-10 13:12	LME	鋁	2315.00美元/公噸
2023-05-09 12:32	LME	鋁	2299.00美元/公噸
2023-05-08 11:57	LME	銅	8580.00美元/公噸
2023-05-04 12:38	LME	銅	8607.50美元/公噸
2023-05-02 15:41	LME	銅	8595.50美元/公噸
2023-04-25 15:07	LME	鋁	2368美元/公噸
2023-04-21 15:40	LME	鐵	26940美元/公噸
2023-04-21 15:39	LME	鐵	25061美元/公噸
2023-04-21 15:39	LME	銅	8881美元/公噸
2023-04-19 10:10	LME	鐵	27843美元/公噸
2023-04-19 10:09	LME	鐵	25615美元/公噸
2023-04-19 10:08	LME	鋁	2440.35美元/公噸
2023-03-21 18:44	LME	銅	8673港元/公噸
2023-03-21 18:43	LME	錫	272720港元/公克
2023-05-11 11:07	LME	銅	8477.50美元/公噸

III. Industry sharing

The user of the account can share information about the recycling on the information platform. From time to time, the technical consultant reviews the content of the information to ensure that it is relevant.



Taking into account the daily reliance of recyclers on mobile phones for communication, recyclers can log in to the electronic information platform through a dedicated mobile application (APP) and can choose to send information in the form of push notifications, so that recyclers who are busy with daily work can receive information more conveniently.

[主頁](#) > [會員分享](#) > [詳情](#)

最新美容產品空瓶回收計劃-回收賺積分-換折扣優惠-禮品-新用戶送港鐵車程

2023-04-28 17:44

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每年的4月22日是世界地球日，是全球共同關注的盛大環保節日，而香港一站式循環經濟平台Carbon Wallet，為了響應今年的地球日，與6大美容護膚品牌合作，推出美容產品空瓶回收計劃「回收真美」，市民可透過回收指定美容產品空瓶賺取積分，以換取折扣優惠或禮品。平台新用戶更可獲免費港鐵車程，即歸回收計劃詳情！
https://hk.ulifestyle.com.hk/topic/detail/20008980?utm_source=website&utm_medium=copied_text

Fresh、The Body Shop、L'Occitane等品牌參與
一站式循環經濟平台Carbon Wallet由即日起至6月30日，與Fresh、L'Occitane、The Body Shop、Factiva、EVOLCARE及Melvita等6大美容護膚品牌合作，並聯同回收合作夥伴V Cycle推出「回收真美」美容產品空瓶回收計劃。市民可於以上6個美容護膚品牌旗下的60多個分店，回收任何牌子的美容產品空瓶(Melvita門市於6月16日至6月30日接受任何牌子的回收物，其餘時間只接受自家品牌產品空瓶)，以賺取Carbon Wallet積分(「CW分」)。

即日起至6月30日，於Fresh、L'Occitane、The Body Shop、Factiva、EVOLCARE及Melvita門市回收指定美容產品空瓶可獲購物優惠或禮品。

https://hk.ulifestyle.com.hk/topic/detail/20008980?utm_source=website&utm_medium=copied_text

聲明：可回收資源平臺內網友所發表得所有內容及言論僅代表其本人，並不反映本平臺之意見及觀點。

點贊

收藏

轉發



江秀儀
DK電腦公司
公司主要經營電腦買賣、
二手電腦零件回收，包括
CPU、RAM、硬盤、主板。

關注

聯絡

發表評論

發表

b. Instant messaging

- I. Users of the information platform account can answer other inquiries of the same industry online.**
- II. Instant messaging can also be used for communication between account users, and since the users of the information platform account are verified by the administrator, it provides a convenient and reliable platform for recyclers to find business opportunities.**

c. Advocacy work

- I. Promotional webinar**



Best Practice Guides for the Recycling of Waste Electrical and Electronic Equipment



Best Practice Guides for the Recycling of Waste Electrical and Electronic Equipment



Content

1.	Overview	2
2.	Scope of the Guides	4
3.	Terms and Definitions	5
4.	Content of the Guides	8
4.1	Appointing a Representative	8
4.2	Legal Requirements	8
4.3	Environmental, Occupational Safety and Health Management System	9
4.4	Hierarchy of Responsible Management Strategies	18
4.5	Sequencing, Sorting and Processing	19
4.6	Tracking of Downstream Contractors	21
4.7	Destruction of Data (Information)	21
5.	Appendix	24



1.1 The Best Practice Guides for the Recycling of Waste Electrical and Electronic Equipment ("the Guides") aims to provide a set of regulatory guidelines for the recycling of Waste Electrical and Electronic Equipment ("WEEE"). This document made reference to Hong Kong's waste disposal license in regard to the requirements for storage, treatment, reprocessing and recycling of electrical equipment, as well as relevant international standards. Consultation with the recycling industry also took place to enable an understanding of the actual operation of the recycling industry, current practices of recyclers, as well as relevant guidelines and reference cases, with the aims to help potential service buyers (customers) make informed decisions, further ensuring that the electronic equipment being disposed or expired could be handled properly to protect the health and safety of recycle workers and the public, and to prevent data leakage until the equipment being destroyed, demonstrating the true value of WEEE recyclers to customers, employees, the community and the general public.





2 Scope of the Guides

2.1 The scope covered by these Guides includes (i) the recycling process of WEEE; (ii) controlled equipment, components and material flow; (iii) used electronic equipment and components; (iv) the collection, refurbishment, repair, resale, dismantling of material, as well as agency activities and recycling-related activities.

2.2 WEEE products includes the following, but not limited to:

- i. Air Conditioner
- ii. Refrigerator
- iii. Washing Machine
- iv. Television
- v. Computer
- vi. Printer
- vii. Scanner and Monitor
- viii. Electric fan
- ix. Microwave oven
- x. Video or audio equipment
- xi. Mobile phones
- xii. Electric Motor
- xiii. Server



Terms and Definitions

3

	Terms	Definitions
3.1	Data	"Data" refers to private, personal and institutional, confidential, authorized or proprietary information stored within electronic devices or storage components that is subject to security management and destruction in accordance with the Guides.
3.2	Downstream contractor	"Downstream contractor" is any recipient to whom control of disposed or expired electronic equipment, components, or materials is transferred. Its services include reuse, refurbishment, dismantling, processing, recycling of material and energy, incineration and waste disposal facilities, etc.
3.3	Electronic equipment	"Electronic equipment", also referred to as "equipment and components", includes, but is not limited to, computers and peripheral devices such as: central processing units (CPUs), monitors, printers, keyboards, scanners, storage devices, servers, network systems, photocopiers, fax machines, imaging systems, printing systems, telephones, televisions, video cassette recorders, camcorders, digital cameras, stereo systems, CD players, radios, mobile phones, pagers, personal digital assistants (PDAs), tablets, smartphones, calculators, game consoles and their accessories, and any components of each device listed above. Also includes any equipment and any associated components that are primarily used to store, process or transmit information.



	Terms	Definitions
3.4	Facility	"Facility" includes, but is not limited to, a physical entity that performs the following actions to electronic equipment: 1) Collection 2) Refurbishment 3) Repair 4) Resale 5) Dismantling
3.5	Recycling chain	"Recycling chain" means all agencies, such as a downstream contractor, involved in the disposal of electronic equipment, components or materials, either through a facility or its control, after the electronic equipment being disposed of or expired and have entered the recycling process.
3.6	Refurbishment	"Refurbishment" refers to any correction made to an electronic device or its operating system, including disassembly or replacement or repair of a malfunctioning component (excluding consumables and/or user-replaceable items such as batteries and printer cartridges), for the device to return to its original preset function and in a normal state.
3.7	Reuse	"Reuse" means making a tested and proven, working product available to another user.

	Terms	Definitions
3.8	Destruction	"Destruction" includes erasing data from a data storage device so as to prevent the data from being restored. Erase includes degaussing or physically destroying information from storage devices to remove all user tags, markings, and activity logs. The data erasure method depends on the storage device to be cleared, and may include software overwriting, degaussing, incineration, shredding, disintegration, grinding, crushing, etc.
3.9	Supplier	"Supplier" includes any upstream entity providing discarded or obsolete electronic equipment, components or materials.

4.1 Appointing a Representative

- i. Each organisation should appoint at least one representative to implement the best practice of WEEE recycling and to ensure that the organisation complies with the legal and regulatory requirements as set out by the Hong Kong Special Administrative Region on WEEE recycling practices.
- ii. The representative should :
 - Have relevant work experience in the industry (at least 3 years recommended);
 - Be appointed by owners or management team of the participating organisation;
 - Promote the awareness of “operation Guides” within the organisation, including but not limited to environmental management, occupational health and safety management.

4.2 Legal requirements

- 4.2.1 According to Section 16 and Sections 21 to 23 of the Waste Disposal Ordinance, the disposal of regulated electronic waste (i.e. air conditioners, refrigerators, washing machines, televisions, computers, printers, scanners and monitors) is subject to licensing controls. With the exception of certain cases, any person who stores, manages, reprocesses or recycles electronic waste must first apply for a waste disposal licence. The waste import and export permit under Sections 20A to 20I of the Waste Disposal Ordinance are in line with the Basel Convention, which has been extended since 31 December 2018 to cover the import and export of regulated electronic waste. The appointed representative should ensure that the organisation holds a valid e-waste disposal licence and complies with any other statutory provisions, the laws of Hong Kong and relevant regulations of the Hong Kong Government.



- 4.2.2 Please refer to the Waste Disposal Ordinance for details of the regulations concerning e-waste disposal licence and the import and export permit.

4.3 Environmental, Occupational Safety and Health Management System

4.3.1 Responsibilities of the Top Management

- i. Each organisation should establish a policy on "environmental, occupational health and safety management", so as to implement an effective management scheme and to showcase its commitment to continuously improve the performance of that management scheme.
- ii. Organisations should also appoint experienced staff to supervise and monitor the implementation and maintenance of the management scheme to ensure that the scheme complies with the recommendations made in this Guideline.

4.3.2 Internal Audit and Management Review

- i. It is recommended that an internal audit of the management scheme and an annual management review should be conducted no less than once a year to ensure the suitability, adequacy and effectiveness of the implementation of this Guideline.
- ii. Internal auditors conducting the exercise should be adequately competent with the ability to make unbiased and impartial judgements.
- iii. Records of the internal audit and management review exercises should be retained.

4.3.3 Competence, Awareness and Training

- i. Organisations should ensure that concerned staff are adequately trained, including knowledge on environmental protection and occupational health and safety, data security, and import and export control of e-waste.
- ii. Organisations should maintain training records of their staff to demonstrate that their staff have the necessary skills and knowledge of the "Best Practice Guides for the Recycling of Waste Electrical and Electronic Equipment".

4.3.4 Contingency Planning Management

- i. Organisations should appoint a Response Coordinator who either stations at the facility or is able to arrive promptly at the facility to respond to emergencies, and to handle and coordinate actions outlined in the contingency plan. The Response Coordinator should be conversant with all aspects of the contingency and emergency response plan, all operations and activities within the facility, the characteristics and location of e-waste handled, the location of all records within the facility, as well as the overall layout of the facility.
- ii. The organisation should prepare a list of all emergency equipment in the facility, including fire safety equipment, serious injury/fatal incidents due to release/spill of hazardous substances or chemical waste, as well as a full list of alarms and controls for the treatment and recycling processes.
 - A. A most up-to-date response and action plan should include (but not limited to) the followings:
 - Response to fire or explosion
 - Response to major release / spillage of hazardous substances

- B. A list of all emergency equipment in the facility should include, but not limited to, the followings: emergency lighting in the event of a power failure, sprinkler system, alarm system, fire extinguisher, fire hose, fire blanket, dustpan and broom, mop, sand/ absorbent, first aid equipment (such as first aid kit), bucket, towel, spare container for storing waste generated, scoop, tweezer, hand-operated/ electrical pump, etc. The list should also indicate the quantity and storage location of all equipment listed. Please refer to the sample below:

Emergency equipment	Usage	Quantity	Location
Eg: Fire extinguisher	Eg: Small fire	Eg: 3	Eg: 2/F of the office building, Dismantling Department, Crusher Room

Regular checking of the emergency equipment should be conducted, eg at least once per year. For special equipment, it is essential to follow manufacturers' or suppliers' recommendations on conducting check-ups and maintenance.

- iii. The plan should be able to identify and state all potentially hazardous situations (in incident types) that may arise at the facility, and evaluate their possible consequences and detail actions to be taken to minimize and mitigate the adverse consequences.
- iv. The emergency plan should be made known to all members of staff, including evacuation routes, the name and location of the Response Coordinator, and where emergency equipment is stored. These information should be placed or posted at a prominent spot in the facility easily accessed by all employees.
- v. A set of contingency actions should be developed for a variety of common incident types, including power or mechanical failure, adverse weather condition, release or spillage of hazardous materials, fire etc. A flowchart should be generated to illustrate the procedures in handling emergency situations, response to fire, and various options to mitigate/avoid serious consequences. Examples of possible emergency response actions include but not limited to:
 - A. Call the Police Department at once by dialing 999.
 - B. If feasible, stop the operation of the facility.
 - C. Evacuate all staff inside the facility to a designated safe assembly place via the nearest available exit/staircase.
 - D. If it is safe to do so, the staff inside the facility may try to put out the fire by using the nearest appropriate firefighting equipment.
 - E. If the fire is out of control, all firefighting activities must be stopped and all personnel must evacuate from the facility immediately.
 - F. Personnel discovering the occurrence of any major release of hazardous materials must alert any co-workers nearby and inform the Response Coordinator immediately.
 - G. Evacuate people nearby.



- H. If it is safe to do so, confine the hazardous materials by using suitable equipment. If more than one type of hazardous materials is released, they should be confined separately and handled one by one to ensure mixing does not happen.
- I. The hazardous materials should be cleaned-up and contaminated materials should be disposed of. If the hazardous material(s) is classified as chemical waste, it should be handled, stored, collected and disposed of in accordance with the relevant legal requirements.
- J. If the situation is out of control, all remedial actions must be stopped and all personnel must evacuate from the facility immediately.
- K. Notify members of the public nearby.
- L. Hazardous materials released should not be flushed down the drain and every effort should be made to contain and recover the materials by various means. Workers responsible for the clean-up operation should be trained for the clean-up work and provided with proper handling and safety equipment.
- M. State the reporting arrangement of any emergency case to the Authority.

- vi. State the names, post titles and phone numbers (office and home/mobile) of the persons who will be involved in coordinating or implementing the emergency response actions and/or clean-up. Emergency telephone directory of different government departments should also be included.
- vii. Details/report of any major incidents, including date/time, nature, scale of incident/extent of impact, emergency response actions taken etc., should be retained for proper record.
- viii. Regular emergency drill and testing on emergency equipment should be conducted with proper records to ensure the feasibility of the emergency plan.
- ix. The emergency plan should be regularly reviewed and updated as needed to ensure its effectiveness.

4.3.5 Identification and Assessment of Environmental and Occupational Health and Safety Impacts

- i. Operations that have the potential to significantly impact the environment and occupational health and safety should be monitored and surveyed.
- ii. Regular assessments should be carried out to evaluate the potential health risks to individuals being exposed to hazardous substances, such as the details presented below.

Hazardous substances	Potential health risks
Lead	Long-term exposure to lead can cause a variety of health problems, including chronic renal failure, interstitial nephritis, drooping wrists in adults, and cognitive impairment in children
Cadmium	Cadmium can replace calcium in the human body, forming cadmium carbonate, which is weaker than calcium carbonate and could lead to osteoporosis. In severe cases, even minor movements, such as turning in bed, can cause fractures
Zinc	Vomiting, loss of appetite, diarrhea, abdominal pain, headache, weakened immunity, lowering high-density cholesterol
Lithium	Weakness in muscle, cramps, dizziness, blurred vision, Meniere's disease, irregular heartbeat, confusion, slurred speech, inflexible hands and feet. Severe cases could suffer from breathing difficulties, spasm, and even death
Chromium VI	Carcinogenic, nasal septum atrophy
Nickel	Tumor, cancer
Mercury	Restlessness, tremors in hands and feet, sensory disturbance, speech disturbance, hearing disturbance, and constricted vision, even death

Emergency equipment	Potential health risks
Arsenic	Carcinogenesis, keratosis pilaris, hyperpigmentation, vascular complications
PCB	Liver cancer, gallbladder cancer and cholangiocarcinoma
PBDE	Interferes with thyroid hormones and has reproductive and developmental toxicity, neurotoxicity and carcinogenicity

- iii. A preliminary inspection (such as a visual inspection) should be conducted to check for any damage to WEEE and electronic equipment and components received and to be processed. If any damage is found that could cause environmental or occupational health hazards, or safety incidents, special treatment must be arranged.

4.3.6 Other Measures to Reduce Occupational Safety and Health Hazards and Risks

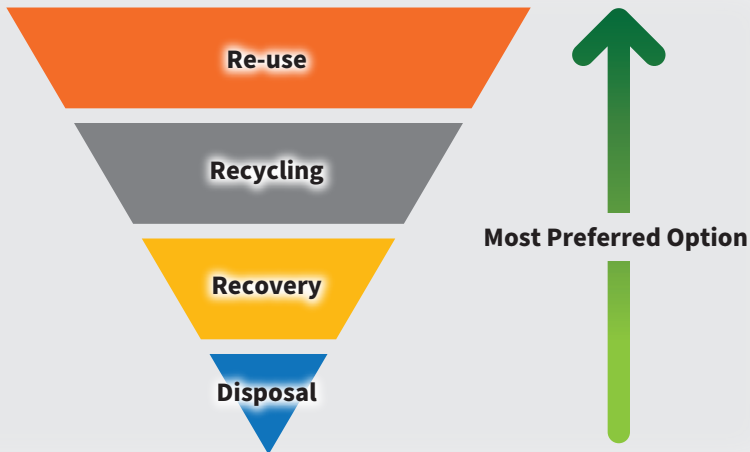
- i. Organisations should provide all staff with the same level of equipment. This includes employees, volunteers, consultants, temporary workers, and anyone who is performing duties under the direction of the organisation.
- ii. To reduce workplace hazards, workers should clean up regularly or after each work shift, so as to keep the workplace and storage areas clean and orderly.

- iii. Organisations should conduct regular safety inspections to ensure that their facilities, plants, machineries, and equipment are safe and reliable to operate effectively and safely.
 - A. Mechanical facilities
 - B. Isolation facilities
 - C. Ventilation facilities (eg, fume hood)
 - D. Dust Control and Cleanup Facilities
 - E. Emergency Shutdown System Facilities
 - F. Fire Extinguishing System Facilities
- iv. Organisations should develop a “planned maintenance schedule” and carry out regular repairs, inspections and maintenance. The schedule should include, but is not limited to:
 - Items for maintenance;
 - Inspection and maintenance schedule;
 - Person in charge; and
 - Content for inspection and maintenance
- v. It is important to provide workers with sufficient personal protective equipment (PPE) for them to deal with the risks involved in their work. These include masks, protective glasses, cut-resistant gloves, safety shoes, protective clothing, reflective clothing, face shields, earplugs, and first aid kits, etc. The PPE list should also indicate the quantity and location where these items are stored.
- vi. Measures should be taken to avoid workers eating in areas that contain hazardous substances.

- vii. Organisations should provide a platform for employees to encourage them to share their opinions on occupational safety and health issues. This will help management to understand the actual working conditions of employees and to develop a more effective safety management system.
- viii. Organisations should keep records of all occupational health and safety inspections, hazard and risk assessments, occupational health and safety controls adopted, and other relevant documentation.

4.4 Hierarchy of Responsible Management Strategies

- 4.4.1 Organisations can refer to the European Solid Waste Pyramid to develop their solid waste recycling strategy. The pyramid below prioritizes waste treatment methods from the top down, with reuse (or refurbishment) being the most preferred method.



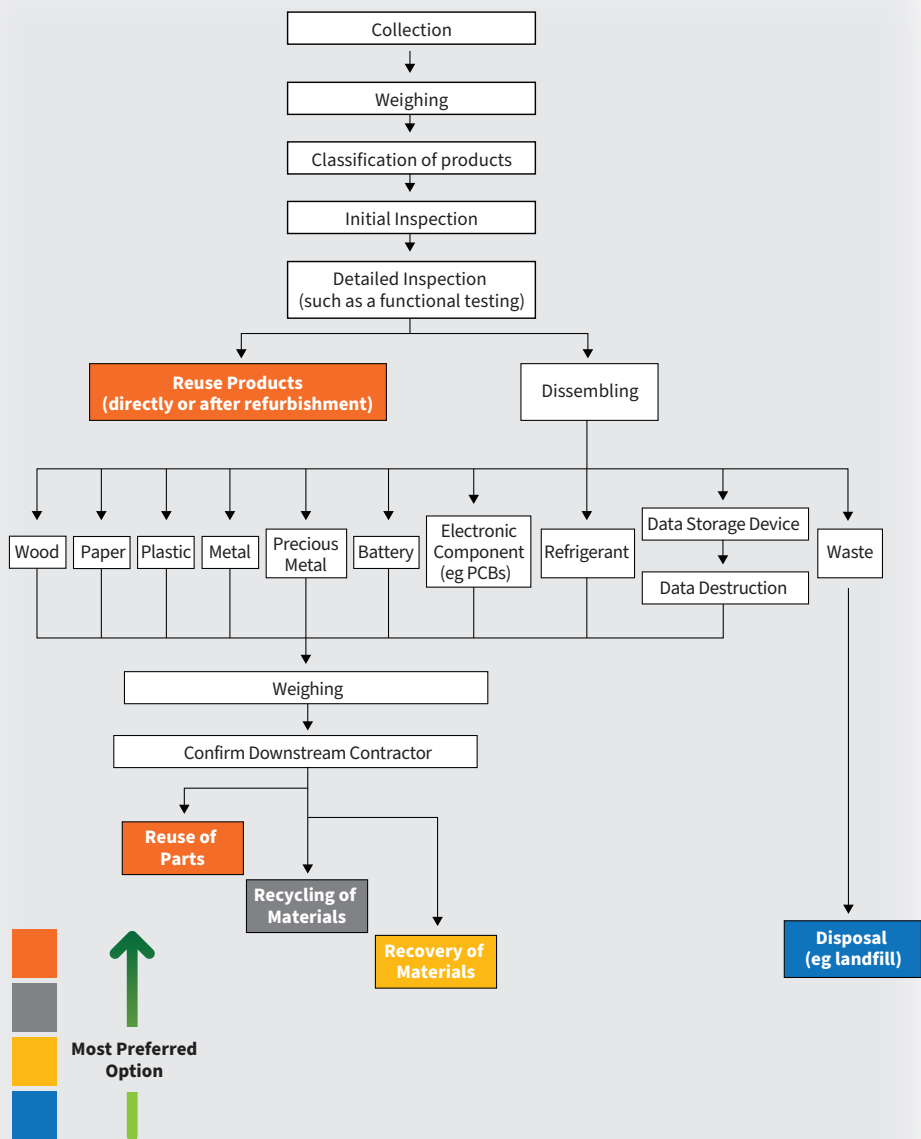
Reuse	Organisations should identify and sort / categorise all equipment and components that can be reused. The facility should then direct these items to a reuse process that meets the requirements of the WEEE control standard.
Recycling	After sorting equipment and components that cannot be reused, the materials should then be sent to the recycling process.
Recovery	It means waste conversion, the process of converting non-recyclable waste materials into something useful, such as electricity, heat, or fuel.
Disposal	If waste cannot be recycled or reused, it should be treated as chemical waste.

- 4.4.2 Organisations can refer to Appendix II for the specific operating procedures of each waste treatment method.

4.5 Sequencing, Sorting and Processing

- 4.5.1 Organisations should evaluate, sequence, sort, and process all electronic equipment, components and materials.
- 4.5.2 Organisations should establish a standard “operation flowchart” for employees to refer to. The following can be used as a guide:

Content of the Guides



4.6 Tracking of Downstream Contractors

- i. Organisations should continuously monitor downstream contractors and verify their recycling flows, including checking relevant records to ensure that they are handling the relevant materials correctly.
- ii. Organisations should retain and preserve all relevant records, including records of downstream contractors and transportation activities.

4.7 Destruction of Data (Information)

4.7.1 Destruction Plan for Data (Information)

- i. Organisations should:
 - 1) Implement comprehensive security measures to protect data, such as designating a dedicated security area for data destruction and restricting its access to authorized personnels only;
 - 2) Prohibit unauthorized persons from accessing or handling equipment that contains data.
 - 3) Ensure that staff involved in data destruction must be adequately trained on a regular basis, and must sign a confidentiality agreement.
 - 4) Administer disciplinary action against employees who violate data security policies.
 - 5) Conduct a risk assessment to determine the likelihood and impact of unauthorized access to the facility and associated equipment.
 - 6) Protect data from theft or loss by clearly identify and mark secure areas with signage that warns of unauthorized access.

- 7) All personnels authorized to access secure areas must sign a confidentiality agreement, promising to prevent data leakage, report any data theft or data leakage incidents, and disclose any incidents that may affect their security authorization.
- 8) If not destroyed internally, send the data to a competent downstream contractor for proper destruction.
- 9) If necessary, outsource to downstream contractors in other countries / regions that can provide secure data destruction services; and
- 10) Maintain records to verify that the data has been destroyed effectively.

4.7.2 Data Destruction Method

- i. Devices and components containing data should be destroyed effectively in accordance with customer requirements. This may include the following methods:
 - a) Erase data stored on storage devices;
 - b) Physical destruction of data storage devices; or
 - c) In accordance with a written contract, arrange data storage devices to be transported to a downstream contractor who has the ability to destroy data.

4.7.3 Reporting

In the event of a data leakage, it is essential to:

- i. Communicate with customers to understand their concerns and the consequences of the data leakage, as well as their understanding of related service terms and responsibilities;
- ii. If necessary, report the data leakage incident to the appropriate authorities;
- iii. Report any known or suspected security breaches;
- iv. Conduct an investigation into the handling of downstream contractors; and
- v. Appoint an independent party to review and verify the data destruction process in order to ensure that it is effective, compliant with standards, legal requirements, and data destruction plans.

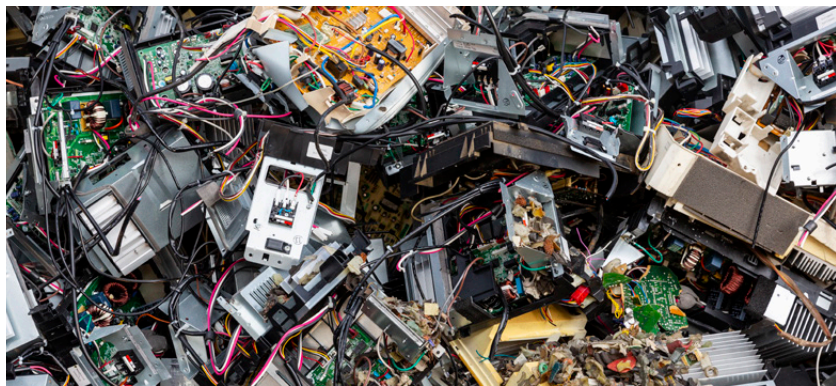


Appendix I – Environmental and Health Impacts of Various Electronic Wastes

Computer / Electronic Waste Components	Potential Health Risks	Potential Environmental Risks
Cathode Ray Tube (CRT)	<ul style="list-style-type: none"> • Silicide • Being cut by broken glasses fell off from CRT • Inhalation or exposure to phosphors including cadmium and other metals 	Leakage of lead, barium, and other heavy metals into groundwater, as well as the release of toxic phosphors
Circuit Board	<ul style="list-style-type: none"> • Inhalation of tin and lead • Possible inhalation of brominated dioxins, beryllium, cadmium, mercury 	Volatilization of similar substances in the air
Desoldered Circuit Board	<ul style="list-style-type: none"> • Health hazards from inhalation of tin, lead, brominated dioxins, beryllium, cadmium and mercury • Respiratory irritation 	<ul style="list-style-type: none"> • The release of tin and lead into the environment can quickly contaminate water and groundwater • Volatilization of brominated dioxins, beryllium, cadmium and mercury

Computer / Electronic Waste Components	Potential Health Risks	Potential Environmental Risks
Chips and other components containing gold	<ul style="list-style-type: none"> • Acid can cause permanent damage if it comes into contact with eyes and skin • Inhalation of acidic fumes, mists, chlorine and sulfur dioxide gases can cause respiratory irritation, which can lead to serious health problems 	<ul style="list-style-type: none"> • Direct dumping of hydrocarbons, heavy metals, bromide components into rivers and river banks • Acidification of rivers has a devastating impact on fish and plants
Computers and its assistive equipment (such as printers, plastic parts of keyboards)	Possible exposure to hydrocarbons, brominated dioxins and heavy metals	Volatilization of brominated dioxins, heavy metals and hydrocarbons
Electric Wire	Workers living in burned areas being exposed to brominated and chlorinated dioxins, polycyclic aromatic hydrocarbons (PAHs)	Release of hydrocarbon fumes, including PAHs, to air, water and soil

Computer / Electronic Waste Components	Potential Health Risks	Potential Environmental Risks
Various computer components (such as steel shafts) encased in rubber or plastic	Hydrocarbons including PAHs and potential exposure to dioxin	Release of hydrocarbon fumes, including PAHs, to air, water and soil
Ink Cartridge	<ul style="list-style-type: none">• Respiratory irritation• Black ink may pose a cancer risk to the human body• Unknown toxicity of blue, yellow and red inks	Unknown toxicity of blue, yellow and red inks
Secondary steel and copper, and smelting of precious metals	Exposure to dioxins and heavy metals	Volatilization of dioxins and heavy metals



Appendix II – Specific Operating Procedures for each Waste Treatment Method

Reuse

- i. Organisations should identify and sort / categorise all equipment and components that can be reused.
- ii. Equipment and components that are not legally sold, such as lost/stolen, counterfeit, or recalled devices, should be sorted and sent directly for material recovery, and cannot be reused.
- iii. Organisations should repair, refurbish, test, and package equipment and components as needed to ensure their continued use.
- iv. Organisations should establish a procedure for functional testing of equipment or components to be reused. This includes all functional tests being normal, or key functional tests being performed if the equipment or components is being prepared for resale or maintenance.
- v. Organisations are suggested to implement a quality management plan (or maintain ISO9001 certification) that covers the sale of reused equipment. This will help to ensure that the concerned equipment and components could be returned to their final destination in accordance with the relevant procedures and policies. It is also recommended to establish a product return / takeback mechanism.
- vi. Organisations should clearly label reused equipment to ensure that it is to be reused, instead of being recycled or disposed of. They should also maintain such records of identification.
- vii. Refurbished equipment should be protected in good and suitable packaging.
- viii. Organisations should ensure that all equipment and components are clean and free of major appearance defects.

Recycling	<ul style="list-style-type: none">i. Organisations should handle and control the final disposal of hazardous e-waste. After sorting equipment and components that cannot be reused, organisations should either recycle the material or dispose of it safely if it cannot be recycled.ii. Organisations should establish a “Chemical Waste Management Scheme” to ensure that chemical waste generated during recycling or reuse operations is managed in accordance with the laws of the HKSAR.
Recovery	Organisations should prioritize the transfer of waste to other countries/regions and downstream contractors who can convert waste into energy before considering disposal.
Disposal	<ul style="list-style-type: none">i. Organisations should ensure that chemical waste is disposed of only in facilities that are licensed and permitted to handle such waste.ii. Organisations should ensure that no waste is disposed at solid waste landfills during the recycling chain.iii. Organisations should maintain the inventory records of all controlled waste/residues.iv. Organisations should ensure that chemical waste is transported and disposed of by licensed and permitted chemical waste recyclers.





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