

Understanding E-Waste Recycling in Singapore



A simple guide for households, businesses, institutions, and communities on how electronic waste should be handled, recycled, and recovered responsibly.

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1. What Is E-Waste?

E-waste, or electronic waste, refers to electrical and electronic items that are no longer wanted, usable, repairable, or commercially useful. These items often contain valuable recoverable materials, but they may also contain integrated batteries, data-bearing components, or other parts that require responsible handling.

Category	Examples
IT Equipment	Laptops, desktops, monitors, servers, keyboards, mice, printers
Mobile Devices	Mobile phones, tablets, chargers, power banks
Networking Equipment	Switches, routers, modems, access points, cables
Office Electronics	Printers, scanners, projectors, telephones
Consumer Electronics	Small appliances, audio equipment, electronic accessories

2. Why E-Waste Recycling Matters

E-waste recycling is important because electronic items may contain both valuable recoverable materials and components that require safe handling. Responsible recycling supports resource recovery, waste reduction, data protection, and environmental responsibility.

- Recover useful materials such as copper, aluminium, gold, silver, plastics, circuit boards, and other metals.
- Reduce the amount of waste sent for disposal.
- Support responsible handling of electronic components and end-of-life equipment.
- Support corporate sustainability and ESG reporting.
- Protect sensitive data stored in laptops, desktops, servers, phones, and storage devices.

Key message for website readers

Responsible e-waste recycling is not just disposal. It is a process that protects data, recovers useful materials, supports sustainability goals, and reduces environmental impact.

3. Singapore E-Waste Recycling Context

In Singapore, the National Environment Agency (NEA) introduced a regulated e-waste management system in July 2021 to support proper collection and handling of e-waste and the extraction of valuable resources from e-waste. The system is based on the Extended Producer Responsibility (EPR) approach, where producers bear responsibility for the collection and treatment of their products when they reach end-of-life. [1]

NEA also states that the regulated system commenced from 1 July 2021 and is implemented through the Resource Sustainability Act. [2]

Important note

This guide is suitable for general customer education. For licence, compliance, or regulatory submission purposes, always verify the latest requirements directly with NEA or a qualified compliance advisor before publishing or relying on the information.

4. What Can Be Recycled?

Many electronic items can be recycled when they are collected and handled properly. The following list can be used on the website to help customers understand what ReTech Resource may be able to collect or coordinate.

Item Type	Examples
Computers and IT Assets	Laptops, desktops, servers, monitors
Data Storage Devices	HDDs, SSDs, USB drives, memory cards
Mobile and Small Devices	Phones, tablets, chargers, power banks and electronic accessories
Office Equipment	Printers, scanners, fax machines
Network Equipment	Routers, switches, cables, access points
Components	Circuit boards, RAM, power supplies, adapters

Battery handling note

Many electronic devices contain built-in rechargeable batteries, and products such as power banks are battery-based electronic items. These may require separate segregation and handling during collection. Standalone household batteries may also require separate handling depending on battery type and condition. ReTech Resource may route applicable battery-containing items or selected battery types to suitable downstream recycling channels where appropriate.

5. How E-Waste Recycling Works

A responsible e-waste recycling process usually follows a clear chain from collection to documentation. This helps customers understand what happens after they hand over their unwanted electronic items.

Step 1: Collection - E-waste is collected from homes, offices, institutions, warehouses, data centres, or designated collection points.

Step 2: Sorting - Items are separated by type, such as IT equipment, cables, printers, monitors, data-bearing devices and electronic components.

Step 3: Data Protection - For data-bearing devices such as laptops, desktops, servers, hard disks, SSDs, phones, and tablets, data should be securely wiped, destroyed, or handled according to the customer's data protection requirements.

Step 4: Assessment & Routing – Collected equipment is assessed and directed to an appropriate downstream pathway. Depending on condition and project requirements, this may include secure reuse or refurbishment through suitable channels, or recycling and resource recovery for end-of-life equipment.

Step 5: Recycling and Recovery - Non-reusable items are dismantled or processed so that valuable materials can be recovered.

Step 6: Documentation - For businesses, proper documentation may include collection records, asset lists, recycling reports, certificates of recycling, or certificates of data destruction.

6. E-Waste Recycling for Businesses

For businesses, e-waste recycling is not only about disposal. It is also about information security, audit readiness, operational efficiency, and sustainability reporting.

Area	What Businesses Should Prepare
Asset Inventory	Prepare a list of items for collection, including quantity, type, serial number if available, and condition.
Data Security	Identify all data-bearing equipment and decide whether data wiping, degaussing, shredding, or physical destruction is required.
Collection Method	Choose whether the items require office pickup, warehouse clearance, scheduled collection, or bulk removal.
Compliance Records	Keep proper records for internal audit, ESG reporting, and responsible disposal documentation.
Asset Condition & Recovery Potential	Record the condition of equipment before collection. Working or potentially reusable assets may require a different downstream pathway from damaged or end-of-life equipment.

7. E-Waste Recycling for Households

Households should avoid throwing electronic items into normal rubbish bins. Small e-waste items, chargers, phones, and electronic accessories should be sent to suitable e-waste recycling points or collection programmes. Power banks and electronic devices with built-in batteries should not be treated as ordinary household waste. Where batteries are removable, they may need to be separated from other electronic items for appropriate handling. Standalone household batteries should be identified before collection so that the appropriate recycling or downstream handling route can be confirmed.

Before recycling personal devices:

- Back up important files.
- Log out of personal accounts.
- Remove SIM cards and memory cards.
- Perform factory reset where possible.
- For laptops or storage drives, consider secure data wiping.

8. What Happens After Collection?

After collection, e-waste is usually sorted into different streams. The exact outcome depends on item condition, customer requirements, and the recycler or downstream partner involved.

Stream	Possible Outcome
Potentially Reusable Equipment	Assessment for suitable reuse, refurbishment or other responsible downstream options where appropriate.
Data-Bearing Devices	Data wiping, shredding, destruction, and certification
Circuit Boards	Recovery of metals and electronic components
Cables and Metals	Material recovery
Non-Reusable Electronics	Dismantling, recycling, or proper disposal
Mixed Electronic Equipment	Inspection, sorting and routing for appropriate recycling or processing.

9. How ReTech Resource Can Help

ReTech Resource supports responsible collection, assessment, secure IT asset handling, recycling, resource recovery and appropriate downstream routing based on equipment condition and customer requirements.

- E-waste collection
- IT asset disposition support
- Secure data destruction arrangement
- Resource recovery
- Recycling and recovery documentation
- Corporate collection programmes
- ESG and sustainability reporting support

ReTech Resource may support the collection and appropriate downstream routing of electronic equipment containing batteries, including items such as laptops, mobile phones, tablets and power banks. Standalone batteries are subject to battery type, condition, handling requirements and the availability of a suitable downstream recycling channel.

Need Help Recycling Your E-Waste Responsibly?

ReTech Resource helps businesses, institutions, and communities collect, sort, and recycle unwanted electronics safely and responsibly.

For collection support, recycling guidance, or secure disposal enquiries, please contact our team.

10. Frequently Asked Questions

What is e-waste?

E-waste means unwanted electrical and electronic items such as laptops, desktops, phones, printers, servers, and electronic accessories.

What should I do with devices that may contain data?

Identify data-bearing devices before collection and confirm whether secure data wiping or physical destruction is required.

Can I include batteries or power banks with my e-waste?

Electronic devices with built-in batteries and items such as power banks may form part of an e-waste collection, but they may require separate segregation and handling. Standalone household batteries should be declared in advance, as acceptance and downstream routing may depend on the battery type and condition.

Why is data destruction important?

Devices such as laptops, servers, hard disks, SSDs, phones, and tablets may contain personal, business, or customer data. Proper data wiping or destruction helps reduce data leakage risk.

What information should businesses prepare before collection?

Prepare the equipment type, approximate quantity, collection location and available asset or serial-number details. Also confirm any data-destruction or documentation requirements.

Can old laptops and desktops still have value?

Yes. Depending on their condition, some equipment may still be suitable for reuse, refurbishment or other downstream recovery options. The appropriate pathway depends on equipment condition, data security requirements and available processing channels.

Is e-waste recycling useful for ESG reporting?

Yes. Businesses can use recycling records, collection reports, and data destruction certificates as supporting documents for sustainability and compliance reporting.

11. Sources and Notes

[1] NEA - E-Waste Management: <https://www.nea.gov.sg/our-services/waste-management/3r-programmes-and-resources/e-waste-management>

[2] NEA - Where to Recycle E-Waste: <https://www.nea.gov.sg/our-services/waste-management/3r-programmes-and-resources/e-waste-management/where-to-recycle-e-waste>

[3] NEA - Extended Producer Responsibility System for E-Waste Management: <https://www.nea.gov.sg/our-services/waste-management/3r-programmes-and-resources/e-waste-management/extended-producer-responsibility-%28epr%29-system-for-e-waste-management-system>

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