

ELECTRONIC WASTE AT YOUR COMPANY

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E-WASTE

○ A consumer society

- Population
- 1 BILLION cell phones are put into production each year

○ Developing countries (500% by 2020)

○ 121,254,254,000 lbs (55 million tonnes) of e-waste are being generated annually (UN)

○ Manufactured

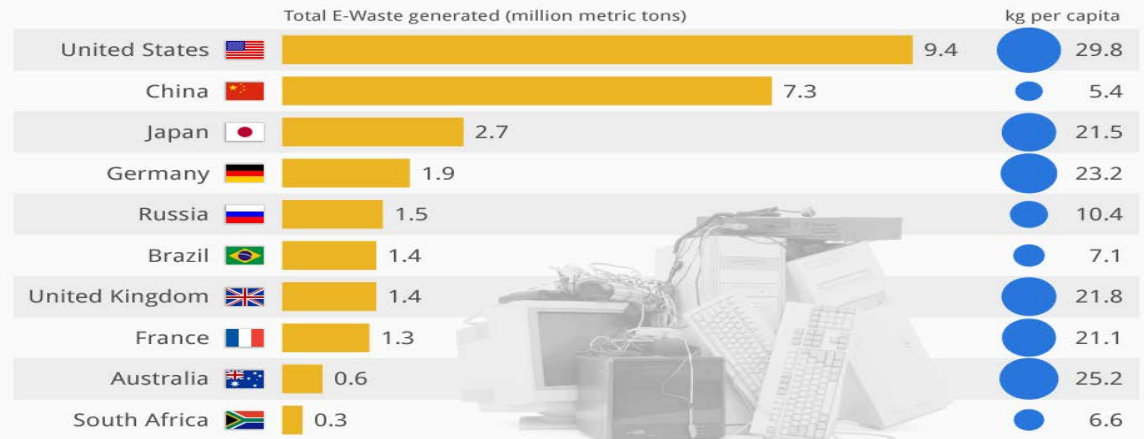
- Hg; Pb; Cd; S; Am

○ Extracted

- Cu; Al; Au; Ag; As; BFRs
- Soil/Water pollution
- Carcinogens

49 Million Tons of E-Waste Were Generated in 2012

Amount of electronic waste generated in selected countries in 2012

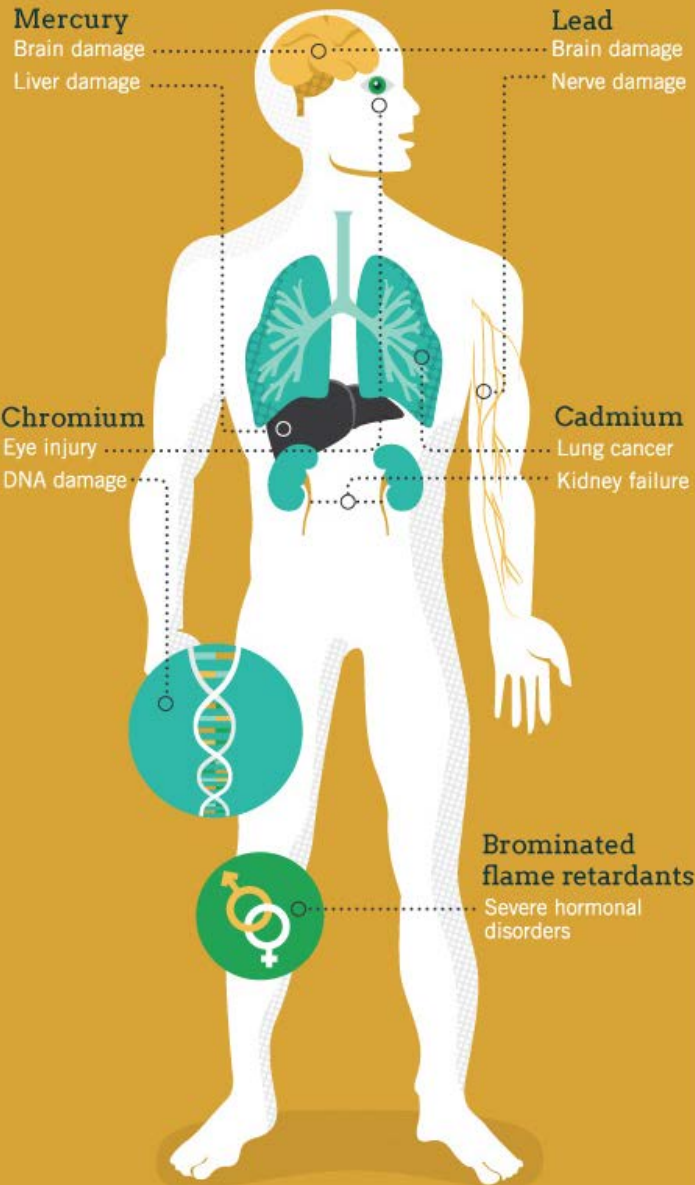


Export of e-waste





The side effects of chronic exposure to common toxic and hazardous materials found in electronics include:



An average mobile phone contains more than 45 elements including:



Lead (Pb) 	Antimony (Sb) 	Arsenic (As) 	Beryllium (Be) 
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Platinum (Pt) 	Palladium (Pd) 	Silver (Ag) 	Gold (Au) 	Copper (Cu) 
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Cobalt (Co) 	(Li-Ion battery)	 Valuable	 Toxic
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Source: Umicore



DOES YOUR COMPANY HAVE THE TOOLS TO ADDRESS THIS MONSTER?



Fact:
It takes
530 lbs
of fossil
fuel;
48 lbs
of
chemicals
and
1.5
tons of
water
to
make
one PC
and
monitor

DOES YOUR COMPANY HAVE THE TOOLS TO ADDRESS THIS MONSTER?

- Knowledge
 - Regulations
 - Your products
 - Your people
- Assessment
 - Current/Future state
- Plan
- Monitoring/Tracking System





KNOWLEDGE:

DOES YOUR COMPANY HAVE IT?

- Do you know the regulations where you operate?
 - Basel Convention (1992: controls waste between countries)
 - WEEE (2003: set collection, recycling and recovery targets for all types)
 - RoHS (2003: restrictions on manufacturers)
 - EWRA (2005: Ca. requires retailers to collect an Electronic Waste Recycling Fee from consumers who purchase electronic devices.
 - **Electronic Waste Management Act (N.J.S.A. 13:1E-99.94 et seq.)** (2010: consumer must be able to dispose of an electronic device for free; other manuf. regs.)
 - Could my company be a manufacturer?
 - Who should be responsible at my company?

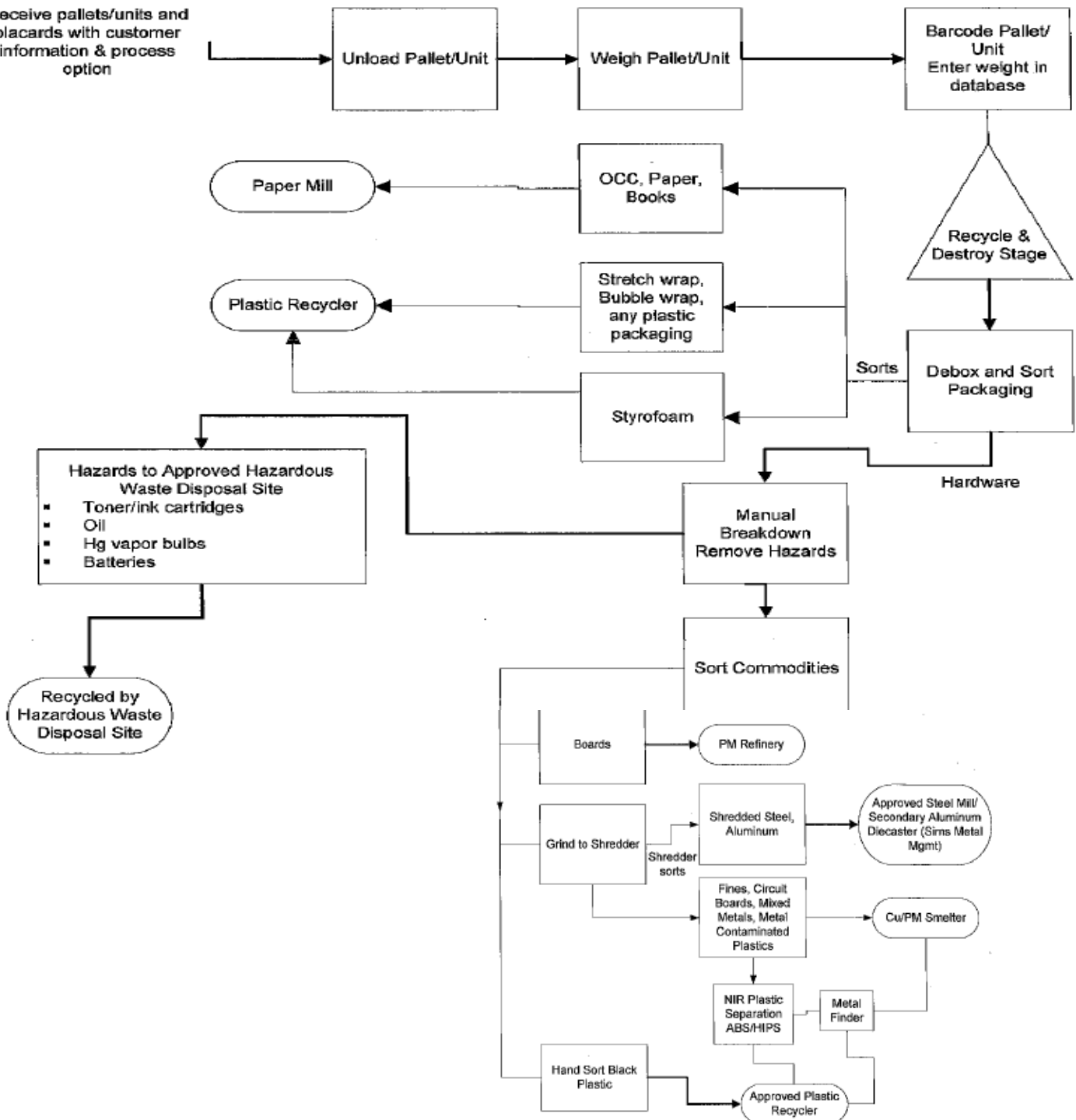


KNOWLEDGE: DOES YOUR COMPANY HAVE IT?

- R2
- e-Stewards
- ISO 14001
- OHSAS 18001
- NAID
- Take-back programs
 - Donate/recycle first
- Audits: do I need to do them?
 - CODs; Security; Contracts; History; Bio-monitoring; Tonnage reports, mass balances, auditing downstream vendors, decontamination, quarantine, costs
- A policy: do I need one?



Receive pallets/units and placards with customer information & process option





As fast as our thumbs can swipe “next” on a tablet screen, developers are creating bigger and better upgrades of every piece of technology. Now, items once considered cutting-edge disappear into obsolescence more rapidly than ever before. According to the United States Environmental Protection Agency, only about 25% of all electronic waste (e-waste) is collected for recycling. The remaining bulk usually ends up in landfills in China or India. Not only is the phenomenon wasteful, the toxic materials housed in many of the gadgets are dangerous to the environment. What can consumers do to prevent this growing digital graveyard?

DO YOUR PART

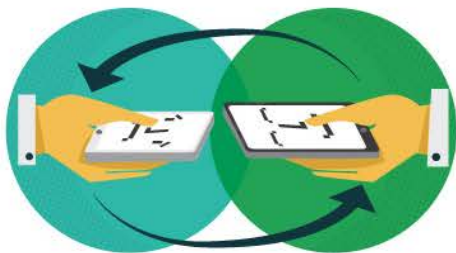
There are currently no federal laws or rules to govern the recycling of electronics, but according to the EPA, there are still a few ways consumers can take action to curb waste.

1. Consider Repair



Think about getting your equipment repaired or refurbished. Even if your electronics are broken, there are usable components that may be repurposed for building or repairing other systems.

3. Lease and Take-Back Programs



Consumers who constantly upgrade to the latest gadgets and don't want the responsibility of dealing with the wear and tear should consider leasing instead of purchasing. There are also take-back programs that allow consumers to return their old equipment to the vendor when they purchase new ones.

2. E-Cycle

Once the computers, monitors, or televisions are received, e-cycling centers disassemble and process the raw materials for future use. E-cycling centers throughout the country can be found at www.ecyclingcentral.com/index.php. Look up their disposal policies and what kind of items they accept.



4. Donate

If your discarded electronic equipment still works, look for charities, nonprofit organizations, or local schools that could find better uses for it.



THINK AHEAD

Before consumers even buy their products, there are ways to preemptively make sure their electronic goods have features that facilitate better recycling and minimal environmental impact.

When possible, find products that:



Have modular designs that encourage easy disassembly and installation.



Are manufactured with snap construction rather than glue.



Contain reduced toxic content.



Don't contain foam, coating, or paint that can prevent recycling.



Are mostly composed of the same type of material so that elements can be recycled together.



Use parts readily available from manufacturers or retailers for easier replacement.