GBRC Webinar

Electronics Recycling Industry Seminar

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CompuCycle

Responsible E-cycling Solutions.

Clive Hess | Executive Vice President | (713) 866-8021 | chess@compucycle.com

What is Electronics Waste

Definition of Electronics Waste

E-Waste or electronics waste is created when an electronic product is discarded after the end of its useful life."

Creates Hazardous Waste

Typical By-products of E-waste:

- **Heavy metals** - **L**ead, mercury and cadmium
- **Chemicals** - CFC's and flame retardants found in plastics

If landfilled, these can potentially leach into the soil, pollute water and enter the food chain.

For more information, visit: https://en.wikipedia.org/wiki/Electronic_waste
and https://www.ban.org/news/2018/11/5/e-waste-chokes-southeast-asia

History of Electronics Waste

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Export of e-waste (in tonnes)

E-waste generated each year

| WORLD 41.8 million | ASIA 16 million | AMERICA 11.7 million | EUROPE 11.6 million | AFRICA 1.9 million | OCEANIA 0.6 million |

NORTH AMERICA

EASTERN EUROPE

WESTERN EUROPE

CHINA

AFRICA

INDIA

SOUTHEAST ASIA

Flow of e-waste exports

● FROM NORTH AMERICA
● FROM WESTERN EUROPE

THE GREEN POST

Where has it been going?

United States generates **over 40 million metric tons** per year of electronic waste.

Since the 1970's, China was considered the primary dumping ground for e-waste in the world, followed by India and Southeast Asia.

Worldwide, **only 20% is collected and recycled.**

The remainder winds up in landfills, traded illegally, or processed in a substandard way.

China bans the Import of E-Waste in 2018

Up until just recently, 70% of the world's electronic waste was exported to China. e-Waste generated in the USA is now being processed domestically and/or landfilled.

For more information, visit Financial Times at   https://www.ft.com/content/26e1aa74-2261-11ea-92da-f0c92e957a96

Certifications

Legislation

- 2003 –California was the 1st state to put an Electronic Waste Recycling statute in place.

- Currently - 28 states have implemented **Electronics Waste Recycling Programs**.

- Texas has a TV recycling program and computer recycling program.

Reputable electronics recycling companies go through annual auditing to get certifications that show that they are processing electronics waste properly.

These certifications include:

For more information, visit https://www.ncsl.org/research/environment-and-natural-resources/e-waste-recycling-legislation.aspx

Recycling Programs

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Certifications

Texas Commission on Environmental Quality

To find where and what types of TV's and Computers you can recycle, visit:

Texas Recycles Computers Program

www.texasrecyclescomputers.org

Texas Recycles TVs Program

www.texasrecyclestvs.org

City of Houston Solid Waste Management Department
Electronics Donation and Recycling

www.houstontx.gov/solidwaste/electronics_recycling

Visit the Website to find:

- Westpark Consumer Recycling Center
- Environmental Service Centers
- Once a Month Drop-Off Sites

Most of these Recycling Programs have a limit on the number of items you can bring in at a time, typically 3 to 5

Certifications

Environmental Protection Agency (EPA)

Electronics Donation and Recycling

https://www.epa.gov/recycle/electronics-donation-and-recycling

- o Why Donate or Recycle your electronics

- o Where to donate or recycle your electronics

- o Certified Electronics Recyclers

  https://www.epa.gov/smm-electronics/certified-electronics-recyclers

- o What are certified electronics recyclers

- o How to find a certified electronics recycler

- o Fact Sheet of the Electronics Recycling Standards: R2 and e-Stewards

  https://www.epa.gov/sites/production/files/2016-02/documents/u_s_epa_fact_sheet_implementation_study_1.pdf

Certifications

Take Back Programs

Dell Reconnect Program – Dell has a partnership with Goodwill that provides free and responsible computer recycling – of any brand and in any condition – at over 2,000 Goodwill locations throughout the United States.

https://www.dell.com/learn/us/en/id/videos~en/documents~reconnect-motion-graphic.aspx

Best Buy Electronics Recycling – accept certain types of equipment, and sometimes there is a charge

https://www.bestbuy.com/site/services/recycling/pcmcat149900050025.c?id=pcmcat149900050025

Staples Electronics Recycling Program - website shows a list of accepted and non-accepted items

https://www.staples.com/sbd/cre/marketing/sustainability-center/recycling-services/electronics/

Can I Recycle This?

CompuCycle's Acceptable Materials

We accept nearly all electronics of any age, working or non-working.

Computer Displays (LCD, LED, Plasma)

Laptops and Desktop Computers

CRT Monitors

Servers

Hubs, Routers, Modems & Switches

Hard Drives

Memory Chips / RAM

Processor Chips

Keyboards & Mice

Cables & Cords

Printers

Circuit Boards/ Electronic Components

Fax Machines

Cell Phones

UPS/ Battery Backup

Power Supplies

PDA's

Telephones

Toner Cartridges (new and used)

Televisions (CRT, LCD, Plasma & LED)

Cable TV Boxes

DVD/CD/VCR Players

Game devices (Xbox, Play Station, Nintendo, etc.)

Can I Recycle This?

CompuCycle's Not Accepted Items

Household Appliances:

Refrigerators

Stoves

Freezers

Air Conditioners

Irons

Rice Cookers

Space Heaters

Floor Lamps

Fans

Rice Cookers

Washer/Dryer

Other:

Vacuum Cleaners

Dehumidifiers

Light Bulbs

Oil Waste

Hazardous Materials

Speakers

Media DLT Tapes

Cassette Tapes

VHS

Tapes

Thermostats,

Smoke Alarms

Paint

Medical/ Biohazard Waste

Solar Panels

Batteries: Alkaline AA, AAA, C, D, 9V, Hearing Aids, Watches

Recycling or IT Asset Disposition (ITAD)

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Business Recycling

What is Different about Recycling for Businesses?

Ultimately, businesses need to work with a Reputable Recycling company that will protect their brand, and their data

Scale: Larger number of Assets

Condition: Reusable Equipment

Value: Want to get Value back for Assets that can be Sold

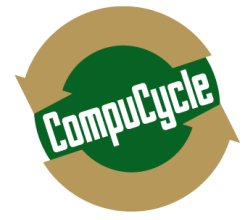**Data Protection:** Concerned about Security of their Data

Environmental Compliance: They can get in trouble if their Assets end up in a Landfill

Reporting: Need Proof of where their Assets Went, and what happened to them
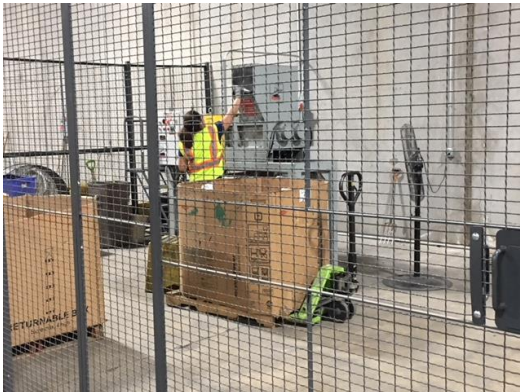
Certificates of Data Destruction and Recycling

IT Asset Disposition (ITAD)

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What is Different about Recycling for Businesses?

Secure Facility

Onsite Services

Data Sanitization

These additional services are the difference between a Recycling company and an
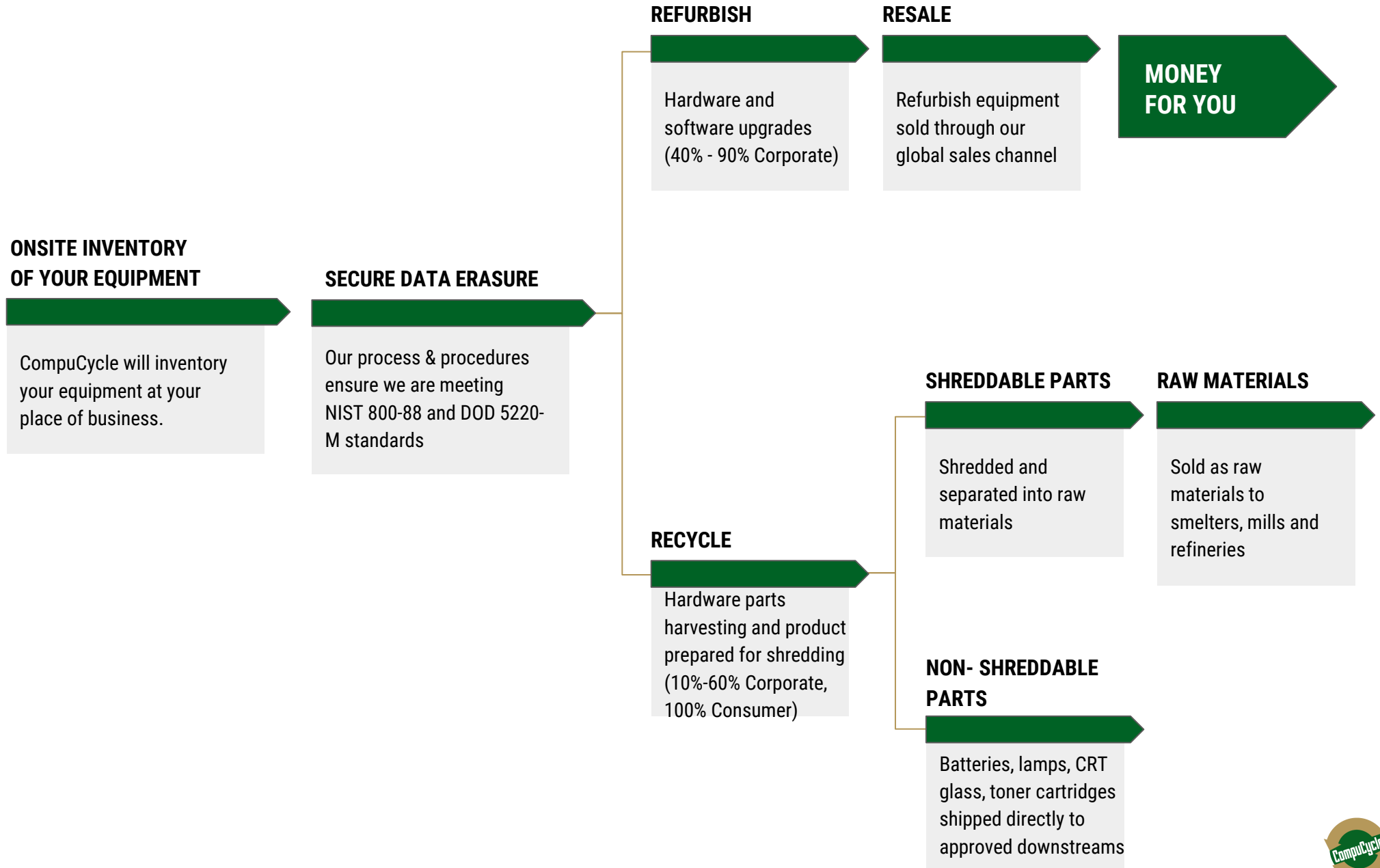IT Asset Disposition Service Provider **(ITAD)**

Additional Services include:

Onsite Shredding

Remarketing of Assets

Serialized Audit Reporting

Secure Transportation

Data Center Decommissioning

Certificates of Data Destruction

Parts Harvesting

Online Portal

How Shredding Fits into CompuCycle's ITAD Process

REFURBISH

Hardware and software upgrades (40% - 90% Corporate)

RESALE

Refurbish equipment sold through our global sales channel

MONEY FOR YOU

ONSITE INVENTORY OF YOUR EQUIPMENT

CompuCycle will inventory your equipment at your place of business.

SECURE DATA ERASURE

Our process & procedures ensure we are meeting NIST 800-88 and DOD 5220-M standards

SHREDDABLE PARTS

Shredded and separated into raw materials

RAW MATERIALS

Sold as raw materials to smelters, mills and refineries

RECYCLE

Hardware parts harvesting and product prepared for shredding (10%-60% Corporate, 100% Consumer)

NON- SHREDDABLE PARTS

Batteries, lamps, CRT glass, toner cartridges shipped directly to approved downstreams

Our Shredder

CompuCycle's state-of-the-art shredder line provides total end-of-life asset destruction in one place, ensuring your sensitive materials are completely, safely and securely destroyed.

BASIC AUDIT REPORT

Lot# 19000

Received: March 1st, 2017

SHIPPED FROM	SHIPPED TO	BILLED TO
	CompuCycle, Inc. 8019 Kempwood Dr Houston, TX 77055 Acct Mngr: Clive Hess	

NO.	ASSET #	CUST ASSET #	CLASS	MFG	MODEL	MODEL #	SERIAL #
1	913160	NONE	(Upstream) TVs	Cisco	TELEPRESENCE HIGH DEFINITION 1080	CTS-500-DISP37-INT	FTX1447600T
2	913161	NONE	(Upstream) TVs	Cisco	TELEPRESENCE HIGH DEFINITION 1080	CTS-500-DISP37-INT	FTX1447600S
3	913162	NONE	(Upstream) Monitor - LCD	Dell	1708FPf	N/A	CN0C552H7287287L37LSA00
4	913163	NONE	(Upstream) Monitor - LCD	MITSUBISHI	m55lcd-bk	N/A	212015784
5	913164	NONE	(Upstream) Network Equipment (Cisco)	Cisco	CTS-500 Telepresense Module	CTS-CODEC-PRI-G2 V04	FOC144480N3
6	913167	NONE	(Upstream) Network Equipment (Cisco)	Cisco	CTS-500 Telepresense Module	CTS-CODEC-PRI-G2 V04	FOC144480JR
7	913168	NONE	(Upstream) Monitor - LCD	Dell	2000 FP	N/A	TW09E2494663526T10QQ
8	913177	NONE	(Upstream) Server	Dell	POWEREDGE 2950	2950 II	FQ87KF1
9	913911	NONE	Hard Drives	Seagate	ST9160411ASG	N/A	5TG0KAZ6

HARD DRIVE AUDIT REPORT

Lot #: 19000

Received: March 1st, 2017

SHIPPED FROM	SHIPPED TO	BILLED TO
	CompuCycle, Inc. 8019 Kempwood Dr Houston, TX 77055 Acct Mngr: Clive Hess Phone: 713-866-8021	

Total Units Destroyed: 8

Total Units Wiped: 12

NO.	SERIAL #	CUSTOMER ASSET ID	MANUFACTURER	MODEL	INTERFACE	SIZE	CAPACITY	PARENT CLASS	PARENT SERIAL #	ASSIGNED SECURITY	PERFORMED SECURITY	STATUS	TECH
1	Y28D88JC	NONE	Maxtor	NA	SATA		80 GB	(Upstream) PC	MXL5280CQ2	HDD Destroy	In Unit: HDD Destroy	SUCCESS	jguzman
2	WCAV3C901221	None	Western Digital	NA	SATA		160 GB	(Upstream) PC	LKCYPAR	HDD Destroy	In Unit: HDD Destroy	SUCCESS	hnunez
3	3JA7DKA1		HP	BD03685A24				Hard Drives		HDD Destroy	Loose Unit: HDD Destroy	SUCCESS	rperry
4	090409FC1223NPG EEGRC	None	HITACHI	HITACHI HTS72321	SATA		160GB	(Upstream) Laptop	L3APD1F	HDD Wipe x 1	In Unit: HDD Wipe x 1	SUCCESS	fstanley
5	NP0JT582WWKD	None	FUJITSU	FUJITSU MHT2040AH	PATA (IDE)		40GB	(Upstream) Laptop	L3THEGP	HDD Destroy	In Unit: HDD Destroy	SUCCESS	fstanley
6	PF1H75E8S8HRZM	none	HITACHI	HDS728080PLA380	SATA		80 GB	(Upstream) PC	LKHLVV0	HDD Wipe x 1	In Unit: HDD Wipe x 1	SUCCESS	jguzman
7	PVFB44ZES9L9LE	NONE	HITACHI	Hitachi HDS72168	SATA		80 GB	(Upstream) PC	LKCYNWH	HDD Wipe x 1	In Unit: HDD Wipe x 1	SUCCESS	jguzman
8	PF1B75E8SKGLMM	NONE	HITACHI	HDS728080PLA380	SATA		80 GB	(Upstream) PC	LKHCZT6	HDD Wipe x 1	In Unit: HDD Wipe x 1	SUCCESS	jguzman
9	PVFB44ZES9BLLE	None	HITACHI	Hitachi HDS72168	SATA		80 GB	(Upstream) PC	LKCYPBP	HDD Destroy	In Unit: HDD Destroy	SUCCESS	hnunez
10	RS2S517M	None	HITACHI	NA	SATA		250 GB	(Upstream) PC	MJ26345	HDD Wipe x 1	In Unit: HDD Wipe x 1	SUCCESS	hnunez
11	WD-WXE208EL1789	None	Western Digital	WDC WD800BEVS-08	SATA		80GB	(Upstream) Laptop	L3R3661	HDD Wipe x 1	In Unit: HDD Wipe x 1	SUCCESS	fstanley

Thank You!

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