Best Practices for E-Waste Management

Last Revised: October 21, 2008

Electronic waste (e-waste) is not only a concern for environmentalists but for IT managers as well. It is important for IT managers to familiarize themselves with the legalities involved in disposing of old PCs, monitors, and peripherals to help both the environment and their organization's bottom line.
**Executive Summary**

Old monitors, outdated CPUs, and boxes full of dusty peripherals that accumulate in IT storerooms should be disposed of properly. Before a PC or monitor is thrown in the trash, IT managers should educate themselves on environmental best practices and the legalities involved in disposing of electronic waste (e-waste).

**Why Is E-Waste a Concern?**

Many electronic devices contain a number of toxic substances such as mercury, lead, cadmium, and PVC. If this equipment is thrown into the trash, these substances can accumulate in landfills and leak into the ground and also into our water systems.

According to the UN, e-waste is the fastest growing waste stream in the world today, and the environmental and legal concerns involved in disposing of e-waste can have important implications for organizations.
Old monitors, outdated CPUs, and boxes full of dusty peripherals that accumulate in IT storerooms should be disposed of properly. Before a PC or monitor is thrown in the trash, IT managers should educate themselves on environmental best practices and the legalities involved in disposing of electronic waste (e-waste).

**Why Is E-Waste a Concern?**

**E-Waste Adds Up**

- One CRT monitor can contain 4-8 pounds of lead.
- There are 500 million obsolete computers in the U.S. alone.
- Only 10% of obsolete computers are recycled. *(Silicon Valley Toxics Coalition, 2008)*
- 14-20 million PCs are thrown out in the U.S. every year. *(United Nations Environment Programme, 2006)*

Many electronic devices contain a number of toxic substances such as mercury, lead, cadmium, and PVC. If this equipment is thrown into the trash, these substances can accumulate in landfills and leak into the ground and also into our water systems.

According to the UN, e-waste is the fastest growing waste stream in the world today, and the environmental and legal concerns involved in disposing of e-waste can have important implications for organizations.

**Recommendations**

Fortunately, there are ways to get rid of old IT equipment while helping the environment and an organization's bottom line:

1. **Be aware of local and federal regulations.** A number of legislative issues can pose a liability to organizations failing to adhere to sound computer disposal practices.
   - A number of U.S. states and Canadian provinces have passed e-waste laws and landfill bans, or have bills that are pending. See the McLean Report download, "North American Electronic Waste Laws," for a summary of current and pending e-waste laws in North America.
   - The **Waste Electrical and Electronic Equipment** (WEEE) and "the restriction of the use of certain hazardous substances in electrical and electronic equipment" (RoHS) directives...
outline rules and regulations for the manufacturing and disposal of electronic devices in the European Union (EU).

2. **Sanitize before disposal.** It is crucial that PCs and laptops are properly sanitized before they are disposed of, as hard drives often contain sensitive information that could cause privacy violations. A digital sanitization tool must be used to sanitize hardware. Hardware can also be destroyed using a variety of physical methods such as incineration or melting.

3. **Shop green.** IT managers should be proactive in reducing the environmental impact of their department by shopping for environmentally friendly products to begin with. Ask manufacturers about the environmental efficiency of their products, look for RoHS compliant labeling on electronics equipment, and get details about how products are dealt with once they are obsolete.
   - **Greenpeace** offers a ranking of electronics manufacturers based on environmental policies and procedures.
   - The **Electronic Product Environmental Assessment Tool** (EPEAT) by the Green Electronics Council ranks manufacturers as bronze, silver, or gold based on factors such as how materials are collected and energy conservation.
   - The **Silicon Valley Toxics Coalition** (SVTC) offers a *Going Beyond EPEAT* tool, “Purchasing Guidelines for Environmentally Preferable Computers,” which provides additional questions that can be posed to manufacturers in addition to the EPEAT recommendations.

4. **Return to manufacturer.** A number of manufacturers, such as Dell, Apple, and HP, offer product takeback programs. Specific takeback criteria varies by vendor, so be sure to review the programs carefully.
   - The Electronics TakeBack Coalition provides an excellent summary of the takeback policies of a number of electronics manufacturers.

5. **Re-use or sell.** PCs that are slightly past their prime can be transferred to other employees who don’t require quite as much functionality. Old equipment can also be sold to employees for their own personal use, or sold online using sites like eBay, Kijiji, or Craigslist.

6. **Recycle.** Many facilities around the world recycle used electronics to extract components that can be re-used.
   - The Electronics TakeBack Coalition offers an interactive map that provides a list of responsible recyclers in the U.S. by state.
   - Ask a chosen recycler whether or not they export e-waste. According to the SVTC, up to 80% of e-waste from the U.S. is exported to developing countries, where underpaid workers who lack proper safety equipment use toxic processes to salvage gold, silver, and other materials from used electronics.

7. **Donate.** Giving old PCs to charity not only helps others in need but can also result in a tax break for your organization. The following resources can help in finding a place to donate:
   - **Yahoo Directory** of charitable organizations that take old computers.
• UsedComputer.com provides a list of non-profit organizations that accept computer donations.
• Computeraid.org refurbishes old computers and donates them to developing countries.

**Bottom Line**

E-waste is not only a concern for environmentalists but for IT managers as well. It is important for IT managers to familiarize themselves with the legalities involved in disposing of old PCs, monitors, and peripherals to help both the environment and their organization’s bottom line.