



Product reuse and recycling

Reusing an electronic product extends its life and reselling refurbished equipment can generate additional revenue. But eventually, all IT equipment reaches the end of its useful life. Recycling programs for electronic equipment can reduce the need for raw materials and energy to manufacture new products and help ensure that returned electronic equipment is managed responsibly.

In 2011, HP reached a milestone of responsibly recycling 2 billion pounds of electronic products and supplies since 1987—equivalent to the weight of 36 Statue of Liberty monuments.¹

HP demonstrates its commitment to environmental sustainability through voluntary and mandatory programs. HP provides product take-back solutions to our customers, many of whom require that we manage their returned IT equipment responsibly. We also comply with relevant regional and local legislation, including the European Union waste electrical and electronic equipment (WEEE) directive, which requires the collection of discarded electronic equipment for recycling, reuse, or recovery.

We support [individual producer responsibility \(IPR\)](#), and believe that all manufacturers should share responsibility for managing electronic waste with governments, retailers, and customers.

We work with a global network of vendors in 67 countries and territories worldwide to collect, process for resale, and/or recycle returned products. [Our hardware product recycling and reuse standards](#), [Policy on Export of Electronic Waste to Developing Countries](#), and [Supplier Code of Conduct](#) align with internationally recognized standards that we expect our vendors to meet. [Audits and independent verification](#) of vendor facilities and practices help ensure compliance.

Highlights in 2011

53

The number of countries and territories where we offer a hardware reuse program

60

The number of countries and territories where we offer a hardware and/or cartridge recycling program

3.44 million units

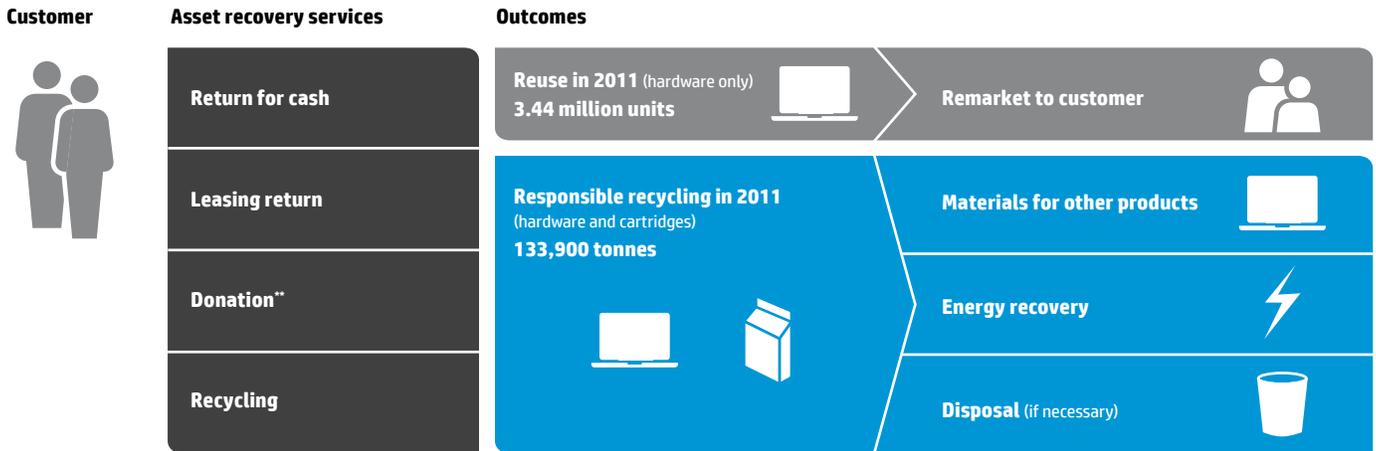
The amount of hardware recovered for reuse and remarketing (26,700 tonnes)

133,900 tonnes

The amount of electronic products and supplies recovered for recycling (295 million pounds)

¹ Calculation based on weight as reported at www.nps.gov/stli/historyculture/statue-statistics.htm.

Product reuse and recycling options*



* Segments in this graphic are not drawn to scale.

** The relationship is directly between customer and charity.

HP employees making an impact: Cécile Mesmain

Cécile Mesmain’s ability to shape HP’s take-back programs in the Europe, Middle East, and Africa (EMEA) region so that they meet both HP customer needs and local legislative requirements has been central to the success of these programs. Learn more about Cécile Mesmain on page 143.

Programs

We use a global network of vendors in 67 countries and territories to collect, process for resale, and/or recycle returned products. Our main programs include:

Services overview	Scope	Developments in 2011
<p>Hardware reuse* (trade in, return for cash, leasing return, donation**)</p> <p>We resell refurbished products from PCs to data center equipment at the end of leasing terms or as part of trade-in agreements. We offer remarketed equipment for many HP and non-HP products, and follow strict processes set out in our Hardware reuse standards to protect user data and meet environmental requirements.</p>	<p>Available in 53 countries and territories.</p>	<p>In the United States, we launched a program allowing consumers to donate the cash value of returned items to one of 15 selected charities including United Way, World Vision, and World Wildlife Fund (WWF).</p>

Services overview	Scope	Developments in 2011
<p>Hardware recycling</p> <p>We recycle returned products that are not suitable for reuse.</p> <p>Consumer recycling services vary by country, depending partly on local regulations and infrastructure. We are cofounders of the European Recycling Platform (ERP), which provides pan-European take-back and recycling services.</p> <p>In the United States, our consumer buyback program allows consumers to return IT equipment of any brand, and check online to see how much money or purchase credit they could receive in exchange. Even if the product is not eligible for buyback, consumers can recycle HP and Compaq products at no cost, and other brands for a small charge.</p> <p>We make appropriate recycling arrangements with commercial customers on a case-by-case basis.</p> <p>Our Hardware recycling standard, Policy on export of electronic waste to developing countries, and Supplier code of conduct set out strict processes to safeguard the environment and protect consumer and commercial customers' data.</p>	<p>Available in 50 countries and territories.</p>	<p>In 2011, we launched a new hardware recycling facility in Kenya (see below).</p> <p>ERP recycled 40,000 tonnes of electronic equipment on behalf of HP in 2011.</p>

<p>HP ink and toner cartridge recycling</p> <p>Customers can return used HP ink and LaserJet toner cartridges to authorized retail and other collection sites through the HP Planet Partners program. In North America, for example, HP is partnering with Staples to collect used HP ink and LaserJet toner cartridges. For some products and countries we also offer several free, postage-paid return options including printable labels, shipping envelopes, collection boxes, and the option, to order bulk pickup. Learn more.</p> <p>HP's "closed loop" ink cartridge recycling process is the first of its kind. Recycled plastic from HP ink cartridges is combined with recycled plastic bottle materials to create new Original HP ink cartridges.</p> <p>The HP LaserJet cartridge "closed loop" recycling process uses recycled plastic from HP LaserJet cartridges to create new Original HP LaserJet cartridges. (See Materials on page 36 for more information.)</p>	<p>We provide free recycling for HP cartridges in 55 countries and territories.</p>	<p>In 2011, we expanded our "closed loop" HP ink cartridge recycling capability to include Vietnam (see sidebar below).</p>
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* Availability of each reuse offering varies by location.

** The relationship is directly between customer and charity. Available in the United States only.

Supporting vendor development

Building capabilities in developing countries

We continue to focus on increasing the volume of HP equipment that is reused or recycled. These efforts include expanding our return and recycling programs in developing countries. A challenge is that capabilities in these countries vary widely and many lack adequate collection and recycling systems. The bulk of electronic waste is often collected and treated informally with few or no controls to safeguard human health and safety and the environment. HP works to improve local capabilities where we are expanding our programs, and we contract a third party to audit our first-tier vendors and ensure they conform to our high standards.

We are working with governments and nongovernmental organizations (NGOs) to improve local recycling capabilities in new markets including Colombia, Kenya, Mexico, and South Africa. We identify

Enhanced capacity for recycled plastic in Vietnam

In 2011, we worked with partners to open a new facility in Vietnam, expanding our "closed loop" HP ink cartridge recycling program. The plant is expected to increase the availability of regionally sourced recycled plastic for use by HP inkjet manufacturing sites in Asia Pacific. (See Materials on page 36 for more information about our "closed loop" ink cartridge recycling process.)

potential vendors, conduct audits to make sure they meet our standards and policies, and require them to provide plans on how they can address any gaps in their approach.

Responsible recycling facilities create employment in disadvantaged communities while helping to protect workers and the environment. For example, the East African Computer Recycling (EACR) facility in Mombasa, Kenya, established in 2011 with our support, receives end-of-life IT equipment from educational, business, and public sector customers. We are working with our NGO partner Camara to encourage the local informal recycling sector to deliver whole products (rather than pre-separated components) to EACR to increase value and address possible human and environmental impacts at a facility set up for proper handling. In the long term, we anticipate that the facility will process up to 20% of Kenya's electronic waste.

To avoid illegal dumping of electronic waste, HP does not allow the export of electronic waste from developed to developing countries for recycling. We engage with governments, directly and through trade associations, to help improve national and international legislation governing the movement of electronic waste, such as the Basel Convention on the Control of Transboundary Movements of Hazardous Waste and Their Disposal. [Watch this video](#) to learn more.

Read more about [Product reuse and recycling on page 47](#).

See a list of [recycling options by country](#).

Performance

In 2011, we recovered 160,600 tonnes of hardware and supplies. This included:

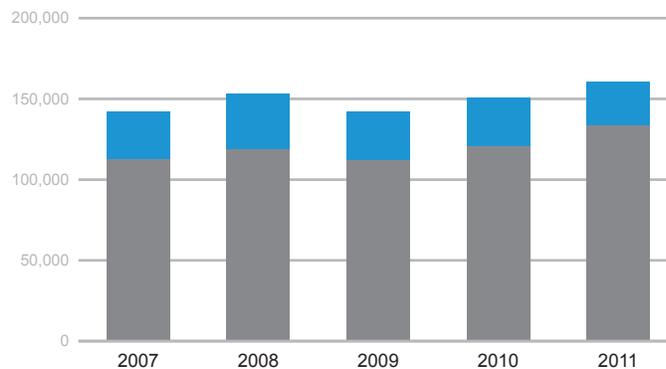
- Approximately 3.44 million hardware units weighing 26,700 tonnes (58.9 million pounds) for reuse and remarketing, nearly 65% returned by business customers.
- Approximately 133,900 tonnes (295 million pounds) for recycling. More than 60% of recycling volume by weight was returned by consumers.

Overall, we have recovered a total of 1,231,500 tonnes (2.715 billion pounds) of electronic products (for reuse and recycling) and supplies (for recycling) since 1987.

We achieved a total reuse and recycling rate in 2011 of approximately 15% of relevant HP hardware sales worldwide.

See Product reuse and recycling on page 69 for detailed product reuse and recycling performance information.

Product reuse and recycling, 2007–2011* [tonnes]



■ Total reuse of equipment**	29,000	34,000	30,000	30,000	26,700
■ Total recycling—computer hardware and supplies combined	113,000	119,000	112,000	121,000	133,900
Total reuse and recycling combined	142,000	153,000	142,000	151,000	160,600

* Recycling totals include all hardware and supplies returned to HP for processing; with ultimate dispositions including recycling, energy recovery, and, where no suitable alternatives exist, responsible disposal. Hardware recycling data from Europe, Middle East, and Africa, and HP LaserJet recycling data is calendar year. The remaining data is based on the HP fiscal year.

** The decrease in tonnage from 2007–2011 is due to a reduction in the average weight of returned units, rather than a decline in the total number of returned units. Returned units during that period were: 2007: 2.96 million units; 2008: 3.46 million units; 2009: 3.58 million units; 2010: 3.81 million units; 2011: 3.44 million units. Tonnage numbers are approximate.

Vendor audits

We have direct relationships with about 75 first-tier reuse and recycling vendors, who in turn manage hundreds of subvendors in their own networks.

We contract Environmental Resources Management (ERM), a third party, to audit our first-tier vendors and ensure they conform to our [Hardware recycling and reuse standards](#) covering the storage, handling, and processing of returned electronic equipment, as well as our [Policy on Export of Electronic Waste to Developing Countries](#) and [Supplier Code of Conduct](#).

Audits also include an assessment of environmental, health, and safety practices and performance, as well as checks on downstream material flows based on shipment and receipt records.

When audits identify areas of nonconformance, vendors must create corrective action plans and respond quickly to improve their performance. Once we receive a vendor's report of corrective actions taken, ERM conducts a verification audit to ensure that adequate changes have been made. Although we prefer to work with vendors to improve their capabilities, in extreme cases we stop using vendors who lack transparency or the willingness to make the required changes.

ERM's audit training program helps our first-tier vendors understand our audit process, how to improve their operational performance, and how they should audit their own vendors.

Our vendor audit program conforms to and exceeds the practices described in the EPA's ["Plug-in to eCycling Guidelines for Materials Management."](#) These guidelines have also been incorporated into the IEEE 1680.1 optional criteria of [EPEAT®](#).

The proposed IEEE 1680.2 criteria for imaging products require the use of recycling vendors who have obtained certification by a qualified third-party auditor in the countries where we offer

EPEAT-registered products. All HP recycling facilities for imaging products in Canada, China, Mexico, Singapore, and the United States meet this requirement. While we support the EPEAT third-party certification program we will continue to supplement it with our own audits of certified vendors. ERM will also continue to audit our noncertified vendors.

2011 audits and findings

In 2011 ERM audited 14 reuse and 39 recycling vendor facilities in 24 countries.¹ Thirty-one of these audits were conducted on site and the remaining 22 were conducted remotely (by phone and email). Twelve were repeat site audits that checked for vendors' ongoing commitment and improved performance.

Seven of the 12 re-audited sites had previously experienced major nonconformances; ERM re-audits confirmed that all major nonconformances had been addressed at four of these sites. In the remaining three cases, vendors had addressed some of the identified major nonconformances, and HP vendor managers continue to work with them to resolve the others.

Most gaps in conformance to HP standards are found in the areas of environmental, health, and safety, followed by security, logistics, and asset tracking, and then management systems. Combined, these three areas accounted for more than 85% of the gaps found during audits in 2011.

We have received and reviewed 122 vendor-generated corrective action plans following the 177 audits conducted since we enhanced our vendor audit program in 2008.²

[Read a statement from ERM.](#)

¹ All initial audits were conducted on-site. Some re-audits were conducted remotely, as appropriate.

² These audits are used as both qualification audits and existing vendor audits. In cases when the vendor did not provide a corrective action plan or HP did not request one, the vendor's services were not used.