

Reducing Waste

Cisco works to minimize the waste output of our operations and our products and packaging. By designing products that use fewer materials, we are minimizing waste before it is created. Through product upgrades, refurbishment, and recycling programs, we are extending the useful life of products. By working with certified product disposal partners, we look to minimize the environmental impact of the small portion of returned materials that cannot be recycled.

Electronic waste is a particular concern, because it is both Cisco's most significant waste stream and the fastest growing type of global waste. According to the UN Environmental Programme, the global e-waste stream will soon reach 50 million metric tonnes annually. Responsible waste management, particularly around e-waste, has become the target of regulation and stakeholder interest. In addition to complying with existing regulations, Cisco has established comprehensive end-of-life management and asset recovery programs to keep our products out of landfills while creating value for our company and our shareholders. We also seek to minimize product waste through our product and our packaging design.

Our Approach

Key objectives of our Waste Management Program are to:

1. Reduce our product waste footprint and return value to the business through product end-of-life management
2. Further incorporate environmental considerations into the product design process, resulting in extended product lifecycles
3. Design packaging to use fewer materials or more recyclable materials
4. Continue to reduce waste from our operations through our Waste Reduction and Recycling Program

Product End Of Life

Cisco has developed a global closed-loop reverse supply chain that allows us to recover and reuse or recycle more than 99 percent of our returned electronic equipment in major markets worldwide. Cisco has many end-of-life processes specifically designed for receiving products from different sources and focused on gaining the highest and best use for all material being returned. The products we reclaim are refurbished and remarketed, disassembled and reused for materials, recycled, or disposed of responsibly. The group at Cisco responsible for the reverse supply chain, reuse, and recycling is our Value Chain Customer Operations team.

Product Reclamation

Cisco receives equipment and materials from many sources. Our largest flow of materials comes in through the Cisco Technology Migration Program, which encourages product returns by offering a discount on new products in exchange for returning used equipment. Depending on current demand, some of these products are refurbished, then resold by Cisco Capital Remarketing or put to reuse by our Global Service Supply Chain team or internal users. In addition to the positive environmental impacts, in FY09, our Value Recovery group was able to save \$153 million.

Cisco requires our contract manufacturers, contract repair manufacturers, distribution depots, internal Cisco labs, and all internal groups at Cisco to submit any unused end-of-life or excess materials for reuse or recycling.

We also receive a smaller flow of equipment from Cisco's TakeBack and Recycle program, which is designed for customers with older or broken equipment that does not qualify for the Technology Migration Program. Returned broken and old products that are beyond capability for reuse, and materials otherwise unqualified for reuse, are sent to a recycler that demanufactures, shreds, and sorts materials into the fraction commodities that constituted the product. These fraction commodities include steel, aluminum, copper, plastic, cardboard, and wire, which are either sold or given to downstream recyclers for use in new products. There are 17 metals in a printed circuit board that can be harvested for reuse. Cisco uses one of a few companies in the world with smelting processes in place to harvest these metals and redeploy the materials back into the metals market.

We house our reclaimed products in locations across the globe and manage our inventory with a Returned Materials Database, providing transparency into collection and reuse patterns. In FY09, we reused or recycled all electronics that were returned to us. Only 0.44 percent of materials were sent to landfill, and these were nonrecyclable items such as broken pallets, wet cardboard, and shrink wrap. A summary of our impact is provided below.

Indicators	FY06	FY07	FY08	FY09
PRODUCT RETURN AND RECYCLING				
Product return (million pounds)	**	**	22.1	23.6
Materials to landfill (percent of returned product not reused or recycled)*	**	**	0.46%	0.44%

* Landfilled material consists of nonrecyclable materials (such as broken pallets, wet cardboard, and shrink wrap).
 ** In previous reports, Cisco reported weight of material sent to Cisco's recyclers. Leveraging process improvements started last year, we are reporting weight of material received from end users, which is the metric of primary concern to stakeholders. Historical data, prior to FY08, is not sufficiently available and is not reported.

Product Receivers and Recyclers

Cisco has established relationships with four world-class recyclers distributed around the globe. Key partner locations are shown in the following figure. These partners adhere to a strict Scope of Work governing treatment of submitted materials, and each of these contracted partners are ISO 14001 certified and audit their downstream recyclers. We require our recyclers to provide us with a monthly accounting of all submitted materials by weight to ensure visibility into all downstream recycling processes. To learn more about our product end-of-life process, watch a [video](#).

Cisco Product Reclamation, Recycling, and Reuse Operations



Global Compliance

Cisco closely monitors regulations relating to product reclamation and adheres to all worldwide directives. Since 2005, Cisco has gone beyond the requirements in the EU Directive on Waste from Electrical and Electronic Equipment (WEEE) by registering as a producer in all EU countries where Cisco is permitted to do so, despite not being defined as the producer in most EU countries.

In 2009, a limited number of Cisco products were affected by regulations in several Canadian provinces. Cisco has met all the requirements in the legislation. Cisco is also closely monitoring developing legislation in many countries and jurisdictions, including Argentina, Brazil, China, the European Union, and India.

Product Design

Cisco has long been committed to designing our products for extended life. Our modular approach to system design means that our networking products are compatible with previous and future versions of Cisco's network components, decreasing the need for premature product disposal. Customers can easily upgrade these products while retaining components such as chassis, power supplies, and back planes. In addition, these products are designed to be compatible with industry-standard chassis dimensions, allowing customers to keep using their existing equipment.

In 2008, we upgraded our Product Requirements Document (PRD) to include a "green" specification. Cisco's product take-back and recycling teams were consulted during the development of this new requirement.

Product Packaging

Over the past year, we have significantly invested in reducing the environmental impacts of packaging. In response to customer feedback and analysis of our FY08 packaging volume data, we recognized the opportunity to reduce the volume of materials that we use and to cut costs, while still effectively protecting our products. Our focus is on finding ways and working with suppliers to use less raw material by reducing the size and weight of packaging and to incorporate more sustainable content in packaging.

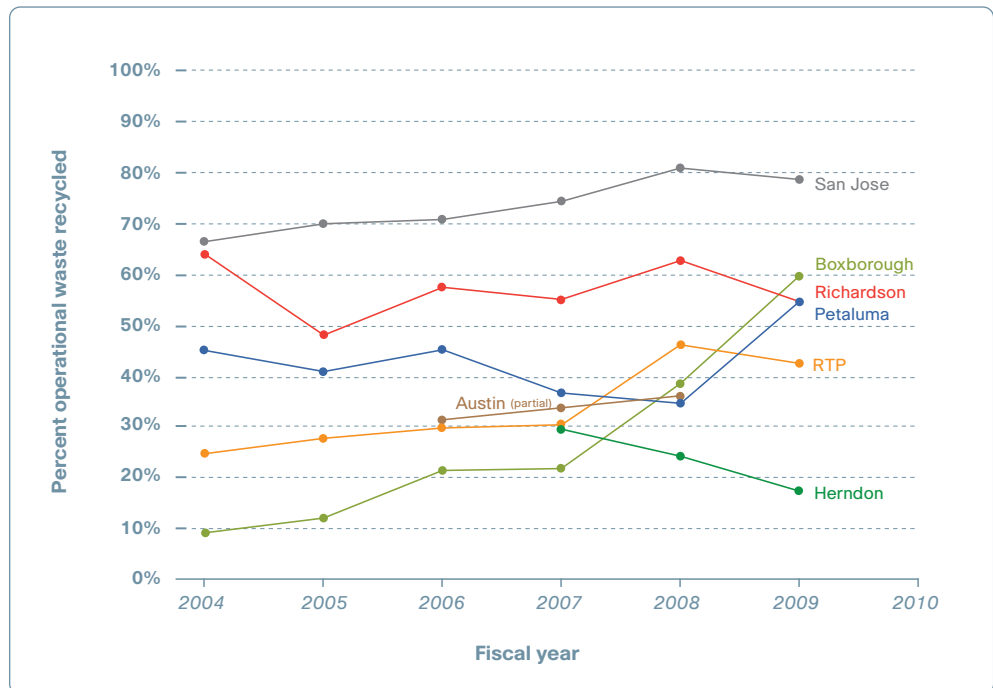
In FY09, Cisco implemented over 40 improvement projects focused on reducing the environmental impacts of product packaging, many of which also served to improve the customer experience with the Cisco brand. More information on our product packaging focus and activities is provided in the CSR and Our Value Chain section.

Operational Waste

Cisco's Waste Reduction and Recycling Program is a key component of Cisco ISO 14001 certification and our global environmental policy. We routinely collect and recycle batteries, CDs and diskettes, beverage containers, trash, wood and pallets, cardboard, mixed paper, confidential waste, packaging materials, toner cartridges, compost, polyurethane foam, landscape waste, mobile phones, food waste, and construction waste.

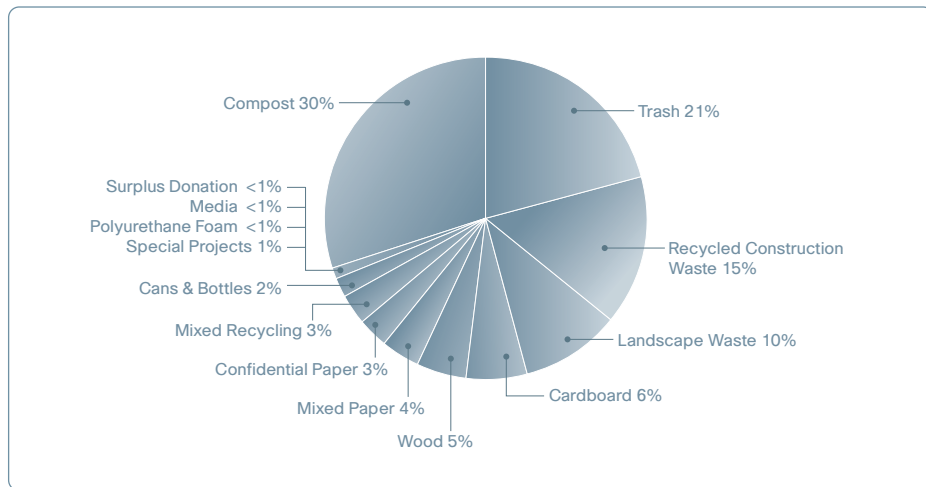
Our offices and facilities throughout North America diverted 68 percent of operational waste from landfill in FY09. Cisco has operational waste reduction and recycling teams established at 21 ISO 14001 sites in North America, Europe, Asia-Pacific and Japan. We are working to standardize reporting worldwide so that consistent, site-level metrics can be reported for each site. Annual operational waste recycling rates for select North American sites is summarized in the following graph. Operational waste recycling performance depends both on Cisco performance and the availability of supporting services by local waste hauling and disposal vendors.

Operational Waste, Select North American Sites



We encourage all Cisco facilities to take steps to reduce their operational waste. Initiatives at our San Jose headquarters, for example, diverted 79 percent of waste in FY09. A breakdown of our waste stream for our San Jose site is provided in the following chart as an illustration of our key sources of operational waste. Since FY08, our San Jose campus has sent waste through a sorting facility prior to landfill to capture additional compostable materials from break rooms and restrooms. We installed a foam densifier in our San Jose office that recycled over 1 ton of polyethylene and polystyrene foam in FY09 that would have otherwise gone to landfill. In addition, we invest in carpet maintenance to extend use beyond the original projected lifespan. As a result of carpet maintenance decisions, we have avoided sending an estimated 1.2 million pounds of carpet to local landfill.

Breakdown of Waste Stream for Cisco’s San Jose Site



In addition to specific initiatives at individual facilities, Cisco has implemented programs at multiple sites that address the following kinds of waste streams:

- **Electronic Waste:** Building on our customer-focused product recovery efforts, Cisco has implemented the eScrap Program to collect and recycle electronics resulting from Cisco’s operations. Through the eScrap Program, we place green bins in our labs for the collection and recycling of materials damaged in research and development. Cisco also hosts Recycle IT events every year for our employees to bring in end-of-life electronics from home for proper recycling. Cisco will take back any electronic goods, regardless of whether it is a Cisco branded product.
- **Food Waste:** In addition to lessening the impacts of our office environments, we strive to reduce the environmental impacts of our cafeterias. Cisco partners with Bon Appétit Management Company, a leader in sustainable food service, to provide Cisco employees in North America with healthy, sustainable, and socially responsible food options. Our sustainable food purchasing initiatives date back to 1999 with the establishment of Bon Appétit’s Farm to Fork program, an initiative to purchase food locally, which promotes local farming and supports sustainable farming and harvesting techniques.

Cisco campuses in San Jose, California, and other North American locations host programs for composting and recycling food wastes where municipal facilities are available to process these materials. During FY09, the food waste separation program at Cisco’s San Jose campus diverted

more than 1416 tons of food waste that otherwise would have been sent to local landfills. The waste was then turned into compost and made available by the municipality for purchase by gardeners. In addition, Cisco's facilities in San Jose and Research Triangle Park, North Carolina, recycle waste vegetable oil. This vegetable oil is converted into biodiesel fuel used to power traditional diesel vehicles.

- **Bottled Water:** In FY08, Cisco's North American offices disposed of 13.7 million plastic bottles of water. In FY09, we ran a pilot water filtration program in Boxborough, Massachusetts, and several San Jose campus buildings that reduced our plastic water bottle consumption level to 11.6 million units. After fully implementing the water filtration program as well as a new beverage vending program throughout North America, we expect the total plastic beverage units consumed will fall further in FY2010. Through these programs, we expect to keep millions of plastic bottles from entering North America's landfills.

Cisco also contracts with vendors to provide facility services that have a low impact on the environment. For example: Xerox uses recycled paper stocks for its Cisco print jobs. Valley Crest Landscape Maintenance, our landscape services provider, follows a standard process of recycling the waste oil used in landscape trucks and equipment, recycling over 200 quarts of oil each year. And ABM, our janitorial services supplier, installed solar power trash compactors on the San Jose campus in FY09, reducing the need to empty the trash from three times a day to once every 10 days.