

# HP 2011 Global Citizenship Report



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See an overview of our global citizenship activities online at [www.hp.com/go/globalcitizenship](http://www.hp.com/go/globalcitizenship).

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# Commitment

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At HP, we embrace our role as a global citizen. As one of the world's largest information technology companies, what we do and how we do it matters. That's why we use global citizenship to help shape and advance our business strategy.



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# Letter from CEO Meg Whitman



Welcome to the HP Global Citizenship Report.

This is HP's annual scorecard for areas like sustainability, social innovation, employment practices, and ethics and compliance, but really, we look at it as a scorecard on our values. The principles of global citizenship have been core to HP's success for more than 70 years. We apply the power of our technology, partnerships, and the expertise of more than 300,000 employees to have a positive impact on society and the world.

For example, we're helping improve world health through drug authentication and by accelerating the diagnosis of HIV in infants. We're helping improve world education through the HP Catalyst Initiative, which brings together some of the best educators to devise new ways of engaging students in science, technology, engineering, and math. We're helping improve world working and living standards through the power and leverage of our supply chain. We're helping make the world greener by continuing to meet and exceed our industry-leading goals for reducing the environmental impact of our operations and products, and by helping our customers reduce their environmental impact. We're also helping get the world involved with HP employees and retirees volunteering more than 744,000 hours of their energy and expertise last year.

As the industry's largest provider of information technology infrastructure, software, services, and solutions, we know that we can help advance the way people live and work. We also recognize that the world's challenges are too big for any single organization to address alone, so we're teaming up with partners worldwide to find solutions. We cultivate relationships with diverse stakeholders, such as social entrepreneurs, industry peers, governments, and nongovernmental organizations. In addition, to promote higher standards across sectors, we endorse the UN Global Compact.

In the Global Citizenship Report, you'll learn about these stories, programs, policies, and many more. We believe that good citizenship and good business go hand in hand. A reputation as a responsible corporate citizen is a competitive advantage that supports our customer relationships, our employee commitment and our shareholder value.

I hope you enjoy this year's report and I look forward to continuing HP's important work that makes a real difference in the world.

Best,

A handwritten signature in black ink that reads "Meg Whitman". The signature is fluid and cursive, with a large, stylized 'M' and 'W'.

Meg

# HP profile



HP is one of the world's largest providers of information technology infrastructure, software, services, and solutions to individuals and organizations of all sizes. We bring the advantages of our scale, the breadth and depth of our portfolio, our innovation, and our competitiveness to our customers every day and in almost every country in the world.

HP is at the forefront of technological advances that improve the way we live and work, empowering HP to play a vital role in addressing serious global challenges and creating sustainable growth. Examples of HP innovations that improve our environment and our society include:

- **Cloud Sustainability Dashboard** HP has developed a Cloud Sustainability Dashboard to help IT professionals better understand and quantify the sustainability impact of cloud computing. Read more in [Research and development on page 33](#).
- **Global Authentication Service** HP is working with nongovernmental organizations, companies in the pharmaceutical industry, and others to combat the challenge of counterfeit medicines. Read more in [Health on page 151](#).
- **HP Early Infant Diagnosis** HP is working with the Kenyan government to reduce the time it takes to diagnose an HIV-positive infant. Read more in [Health on page 151](#).

## Looking back at fiscal year 2011 (FY11): A year of changes and challenges

In 2011, an uncertain macroeconomic environment, natural disasters that affected our supply chain and inventory, several strategic announcements, leadership changes, and inconsistent overall performance all contributed to a year of mixed financial results. Despite these challenges, our businesses remain strong and HP is well positioned for the future, maintaining our number one or number two share positions across the majority of our portfolio.

## Our strategy

The advances and innovations that enable HP to help address some of the world's most daunting challenges are based on the foundation of the company's strategy.

### Highlights

**\$127 billion USD**

Recorded \$127 billion USD in net revenue for FY11.

**52 million**

HP shipped more than 52 million printers in 2011.\*

**62 million**

HP shipped more than 62 million PC units in 2011.\*\*

**92%**

of the Fortune 100 are HP Software customers.

\* IDC WW Quarterly Hardcopy Peripherals Tracker, February 2012. This data is calendar year.

\*\* IDC WW Quarterly PC Tracker, January 11, 2012. This data is calendar year.

## Build the core

**HP infrastructure** HP's hardware franchises, market-leading server, storage, and networking business, and PC, imaging, and printing groups account for about 70% of our revenue. Everything we do either amplifies or builds on this unique strength.

## Expand the core

**Software** HP provides best-in-class software to expand, optimize, and manage the core. Our software differentiates our hardware to improve its performance and help solve customer problems. It also allows us to manage heterogeneous environments, consisting of our infrastructure as well as others'. The addition of Autonomy to HP provides a platform that enables us to address customers' information-management challenges.

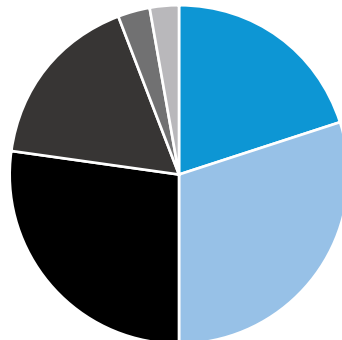
## Add value to the core

**Services** HP services envelop our core infrastructure and software to enable customers to get increased value from HP. Through broad offerings such as outsourcing, application, consulting, and technology services, we work to ensure that our technology meets customer needs. We build relationships that can last for decades.

## Make it work

**Solutions** Our solutions add value by combining our technologies to advance customers' business objectives in a holistic and compelling way. We have packaged our capabilities into five key solution areas: converged infrastructure, application transformation, enterprise security, information optimization, and hybrid delivery.

Revenue by segment, fiscal year 2011 [percentage]



Imaging and Printing Group	20%
Personal Systems Group	30%
Services	27%
Enterprise Servers, Storage, and Networking	17%
HP Software	3%
HP Financial Services	3%

HP strives to define markets and lead in innovation. We increased research and development spending in 2011, to \$3.2 billion USD, and expect to continue to bring the very best innovations to market.

## Shared values

HP's shared values and [company-wide objectives](#) include a long-standing commitment to global citizenship. Broader than any single organization or program, global citizenship at HP determines how we capitalize on our technologies and expertise to help address the world's major social and environmental challenges and accelerate positive change.

## HP corporate summary

Fortune 11—United States

Fortune 28—Global

President and Chief Executive Officer: [Meg Whitman](#)

Nearly 350,000 employees\*

Incorporated in Delaware, United States

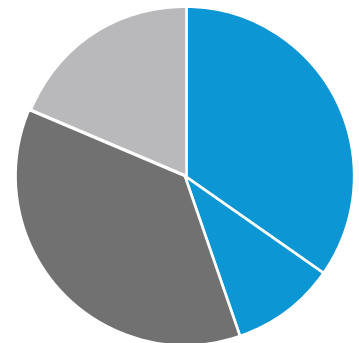
Listed on the New York Stock Exchange with the ticker symbol HPQ

[Corporate and regional headquarters](#)

Recorded \$127 billion USD in net revenue for FY11

\* As of October 31, 2011.

Revenue by region, fiscal year 2011\* [percentage]



Americas	45%
United States	35%
Canada, Latin America, and Other	10%
Europe, Middle East, and Africa	37%
Asia Pacific	19%

\* Does not total 100% due to rounding.



# Global citizenship strategy



As one of the world's largest technology companies—with operations in more than 170 countries—our technology and our people matter to the world. Global citizenship is rooted in values that have successfully guided our company for more than 70 years. Employees, customers, and other key stakeholders increasingly look to HP for leadership in responsible operations, innovative products and solutions, collaboration, and capability building.

HP embraces our role as a global citizen, and we recognize that what we do and how we do it matters. Global citizenship is pervasive throughout our business strategy. It is integrated into our policies and aligns with our core values. It spans everything from ethics, human rights, and environmental sustainability to privacy, responsible supply chain management, and social innovation. Nearly 350,000 employees<sup>1</sup> live our values, every day.

Today the world faces serious challenges—such as responsibly meeting the needs of a fast-growing population, addressing the effects of climate change, and advancing global health solutions. No single entity can meet these challenges alone. Governments, nongovernmental organizations, and companies all have an essential role to play.

To make a positive impact, we collaborate across institutions, industries, sectors, and borders. We apply our scale, talent, partnerships, and portfolio to help develop solutions to major environmental and social issues.

Through these efforts, we build strong, collaborative, and trusting relationships with diverse stakeholders. Their commitment and expertise help us to refine our global citizenship strategy to improve the lives and businesses of people around the world.

Global citizenship also makes us more competitive, spurs innovation, helps us attract and retain the best employees, and fuels growth. (See [Global citizenship and business value on page 8.](#))

**“The betterment of our society is not a job to be left to a few. It’s a responsibility to be shared by all.”**

—David Packard, Co-founder, HP

<sup>1</sup> As of October 31, 2011.

## Global citizenship priorities

HP believes that by operating profitably and responsibly, we make a positive impact on communities worldwide. We are well positioned to help address the world's major environmental and social challenges and accelerate change in several important areas. During the coming decade, we intend to continue to focus on enhancing environmental sustainability across the product life cycle, building a leading human rights program, promoting supply chain responsibility and improving suppliers' capabilities, being among the leaders in the industry to eliminate conflict minerals, advancing an accountability approach to ensure respect for privacy, and addressing global health and education issues through social innovation.

## Global citizenship reporting

We embrace transparency and accountability when communicating our progress in global citizenship. This is the 11th consecutive year that HP has reported on its global citizenship programs, performance, and goals. Over that period, we have broadened the scope of our Global Citizenship Report substantially, providing greater transparency into our operations, employee practices, product development process, supply chain management, social investments, and other aspects of our business. (See [Overview on page 174](#) for more detail.)

# Global citizenship and business value

Global citizenship is an important source of business value for HP. Our efforts enhance our reputation, strengthen our relationships with customers and other stakeholders, open up new market opportunities, and stimulate innovation and creativity.

Our investments in this area strengthen our business in numerous ways. Global citizenship-related business value drivers include the following:

**Access to capital** Investors increasingly consider global citizenship programs and performance in investment decisions (see [Investors on page 10](#)).

**Competitiveness** Leadership in global citizenship builds trust with customers, spurs innovation, and helps us identify opportunities for growth.

**Cost savings** Energy efficiency and other conservation efforts in our operations and those of our suppliers reduce costs and increase productivity. See [HP operations on page 52](#) and [Manufacturing on page 38](#).

**Customer insight** Global citizenship helps us understand and meet customer expectations in areas such as product environmental performance, privacy, and supply chain responsibility (see [Customers on page 9](#)).

**Employee engagement** By demonstrating a commitment to global citizenship and actively engaging employees in [volunteering projects](#), we instill pride in HP as a company that matters, helping us attract and retain the most talented workforce. See [HP people on page 120](#).

**External engagement** Engaging with stakeholders brings insight into emerging trends, risks, and opportunities. See [Stakeholder engagement on page 12](#).

**Influence** Global citizenship gives us a powerful voice on issues that are vital to our industry, our customers, and the world.

**Innovation** We sharpen our competitive advantage by developing [groundbreaking technology](#) that improves the lives and businesses of people around the world, and helps to solve challenges in [environmental sustainability](#), [education](#), and [health](#).

**Market access** Preparing for upcoming legislation, participating in [public policy](#) discussions, preserving our record of legal compliance, and innovating and collaborating to meet societal needs help us maintain access to markets.

**Reputation management** Leadership in global citizenship enhances our reputation with customers, governments, nongovernmental organizations, investors, and others (see sidebar on [page 10](#)).

**Risk assessment and reduction** Focusing on global citizenship helps us reduce risks to our [operations](#) and those of our [suppliers](#) and other business partners.



## Customers

Consumers, enterprises, and government agencies consider companies' environmental and social performance when choosing goods and services. We work hard to understand and meet customers' expectations about HP's programs and progress across a broad range of global citizenship issues. We also provide products and services to help them improve their own performance (see [Products and solutions on page 29](#) and [Tech gallery: environment on page 67](#) for more information).

### Consumers

HP highlights product features that help consumers reduce their environmental impact and save money. Many HP products qualify for [eco-labels](#) including ENERGY STAR®, EPEAT®, China's Energy Conservation Program, Germany's Blue Angel, and Japan's Green Mark.

We also engage consumers through the [HP Live Green](#) Facebook page. This provides information about our wide offering of sustainability-related [products and solutions](#), programs, and tools. Visitors can post comments, ask questions, and provide feedback. In 2011, we launched an [HP.com EcoSolutions Store](#) that allows customers to find and buy these products quickly and easily.

## Enterprise customers

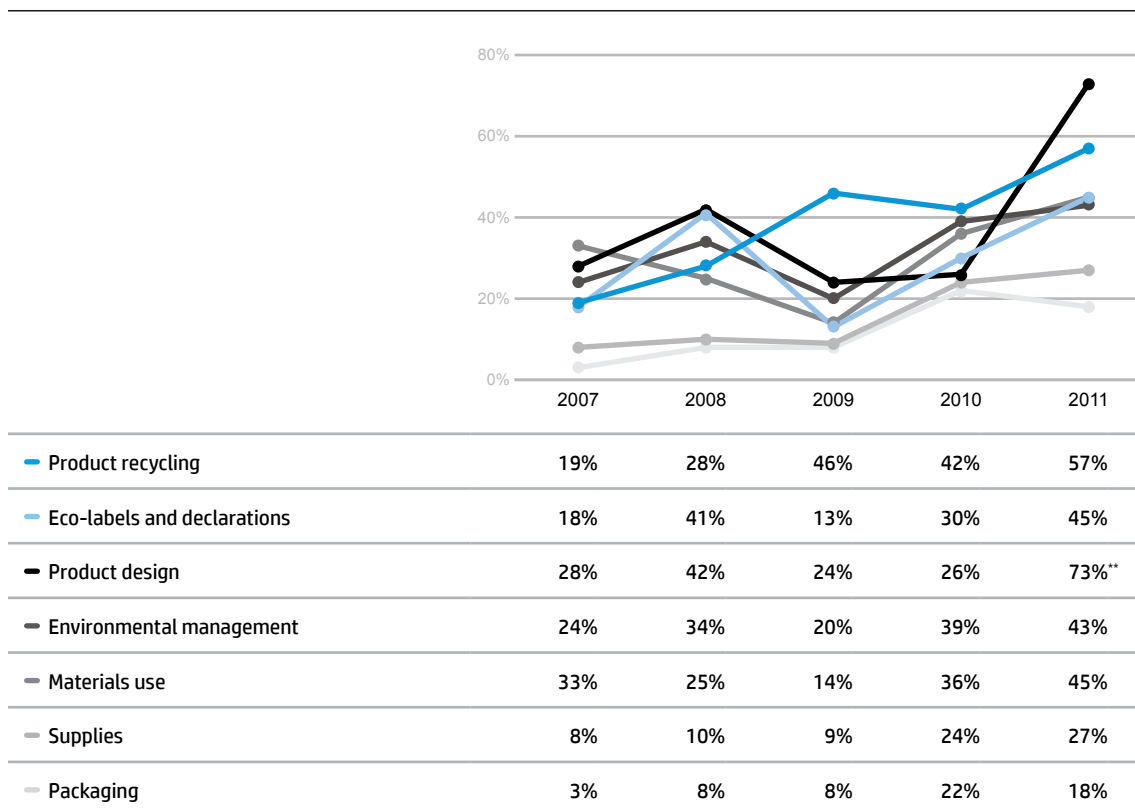
HP offers tools and resources to help enterprise customers understand and reduce the environmental impact of their information technology (IT) infrastructure. For example, the "[HP Sustainable IT Purchasing Guidance](#)" white paper is a vendor-neutral guide to help enterprise customers develop environmental procurement criteria for IT products and services. It outlines criteria, including eco-labels, product attributes, packaging, end-of-use services, and supply chain responsibility, and includes a sample questionnaire for evaluating IT vendors.

An increasing number of enterprise customers include global citizenship criteria in their procurement policies, and request information related to areas such as the environment, ethics, anti-corruption, and supply chain responsibility. For example, many requests for proposals (RFPs) that HP receives contain environment-related questions (see table below).

### Government agencies

Government policies and programs related to social and environmental priorities affect our ability to access and compete in several markets. Public sector buyers worldwide consider criteria in procurement related to the environment, privacy, supply chain

**Customer environmental requirements in requests for proposals, 2007–2011\*** [percentage]



\* 2011 data set has broadened to include reported data for RFPs with environmental questions for all regions (previous data only included HP's Europe, Middle East, and Africa region). Does not include RFPs for which environmental questions were addressed directly by customers or our sales force. Data is for the calendar year. Inquiries may have multiple subjects, so categories total more than 100%.

\*\* The product design category includes topics such as energy efficiency, chemical emissions, and design for recyclability.

practices, and other factors. [Eco-labels](#) are often a requirement for doing business with the public sector, and [supplier diversity](#) is critical to fulfilling contracts with federal and many state agencies in the United States, and increasingly in Australia and China.

Governments are increasingly looking to public-private partnerships as a way to address critical global challenges. HP considers these partnerships an important aspect of our [global citizenship strategy](#). For example, we are working with the [Dutch Sustainable Trade Initiative](#) to improve the social and environmental responsibility performance of our suppliers in the Pearl River Delta region of China.

## Investors

Socially responsible investors evaluate environmental, social, and governance factors as well as company financial performance when making investment decisions. HP is among the top 50 companies most widely held by socially responsible investor (SRI) funds, and more than 100 SRI funds hold HP shares.<sup>1</sup>

We believe that providing information about our global citizenship performance enables socially responsible investors to make better decisions regarding their investments in HP.

Analysts from SRI firms and other investment-focused organizations regularly report on HP's performance (see above).

## Global citizenship, reputation, and business outcomes

HP conducts research to understand factors that impact our reputation and the effect those have on a range of business outcomes. In 2011, we surveyed corporate IT decision makers, consumers, financial and policy leaders, university researchers, and employees about their perceptions of HP.

Organization	2011 ranking or rating
Carbon Disclosure Project	In 2011, HP scored 84 out of 100 for disclosure and placed in the "B" performance band. HP was included on the <a href="#">S&amp;P 500 Carbon Disclosure Leadership Index</a> .
Dow Jones Sustainability Index (DJSI)	HP is one of six companies listed as a leader in the DJSI North America index in the Computer Hardware and Electronic Office Equipment sector.
FTSE4Good	HP is included in all four FTSE4Good indices for the ninth consecutive year.

Several factors contribute to HP's overall reputation. Of these, the ones that are related to global citizenship collectively accounted for about 40% of HP's reputation. These factors include environmental responsibility, product recycling, governance, data security, supplier responsibility, employment practices, and community engagement.

In addition to identifying the impact on perception, our research has also revealed a link between these global citizenship factors and important business outcomes, such as customers' purchase decisions, policy leaders' decisions that impact HP, and our employee recruitment and retention. In other words, these factors function similarly to other well-known business outcome drivers such as quality and innovation.

The research results underscore the importance of global citizenship to HP's business, and the benefits we gain by managing global citizenship rigorously and communicating our progress effectively.

# Global citizenship governance

Strong global citizenship performance begins at the top and depends on leadership, participation, and support throughout an organization, especially for a company as diverse and complex as HP.

<sup>1</sup> Ipreo.

## Global citizenship governance



## HP Board of Directors' Nominating and Governance Committee

The Board of Directors' [Nominating and Governance Committee](#) assists the board in fulfilling its responsibilities related to public policy, government relations, and global citizenship. The committee identifies, evaluates, and monitors social, political, and environmental trends and concerns as well as domestic and foreign legislative proposals and regulatory developments that could significantly affect HP's business. The committee may also report and make recommendations to the board relating to activities, policies, and programs with respect to matters of local, national, and international public policy affecting HP's business. These may include:

- Trade policy and major legislative and regulatory developments
- Relations with regulators, governmental agencies, public interest groups, and other stakeholders
- HP's policies with respect to global citizenship
- General guidelines for political contributions

## HP Global Citizenship Council

HP's Executive Council retains overall responsibility for global citizenship as part of our business strategy. Our Global Citizenship Council helps to ensure commitment and alignment to HP's global citizenship objectives companywide. The council comprises executives and subject matter experts from across HP, and seeks input from across our business groups and functions, as well as from external stakeholders. It meets at least quarterly to strategically promote and advance global citizenship through integrated risk and opportunity assessment, governance, and policy oversight.

## Topic-specific councils

HP also maintains separate councils dedicated to areas such as the environment, supply chain, ethics, and privacy and information management (see graphic above). These councils include leaders with relevant expertise from our business units, regions, and functions. Each council meets periodically to evaluate our progress in implementing our strategies, and to establish performance goals.

### Global Citizenship Council

The Global Citizenship Council is sponsored by a member of the HP Executive Council who reviews progress quarterly. Co-chairs include the company's vice president of Sustainability and Social Innovation, and the vice president and chief ethics and compliance officer. Other executives and subject matter experts represent the following areas:

- Communications
- Enterprise Risk Management
- Environmental Sustainability
- Ethics and Compliance
- Global Labor Relations
- Global Security Services
- Global Social Innovation
- Government Relations
- Human Rights
- Investor Relations
- Privacy and Information Management
- Social and Environmental Sustainability and Compliance

# Stakeholder engagement



Global citizenship attempts to address a broad range of issues, and it is impossible for one organization to tackle these issues alone. HP pursues long-term, scalable solutions to major environmental and social challenges through collaboration with our diverse stakeholders. These efforts cross borders, industries, institutions, and sectors. From these relationships and activities, we gain valuable insights into emerging trends, external standards and regulations, and risks and opportunities. These in turn help inform our global citizenship approach and broader business strategy.

Earning the trust of our stakeholders is the first step in building effective and lasting relationships. We do this by operating responsibly, reporting transparently on our performance, engaging in open dialogue, and acting with integrity in everything we do.

We engage with the following stakeholder groups:

- Academics
- Customers
- Employees
- Investors
- Legislators and regulators
- Local communities
- Nongovernmental organizations (NGOs)
- Peer companies
- Professional organizations
- Social entrepreneurs
- Suppliers

We structure our engagements based on the issue we are addressing. In some cases, such as conflict minerals (see sidebar on the following page), an approach managed by a select group of experts from within HP is most effective. Other issues, such as energy efficiency and climate change, impact HP on many dimensions and so require participation from people representing a wide range of areas across the company.

## 2011 highlights

Key examples of stakeholder engagement in 2011 included:

- **HP Executive Environmental Advisory Council (EEAC)** Comprising 12 prominent business, academic, and NGO thought leaders, the [HP EEAC](#) provides objective environmental counsel to HP leadership. This insight helps us better evaluate opportunities, set priorities, and assess progress in areas such as [energy efficiency](#), [product reuse and recycling](#), and [supply chain responsibility](#).
- **Advancing low-carbon innovation** HP has collaborated with the [Center for Climate and Energy Solutions \(C2ES\)](#)—formerly the Pew Center on Global Climate Change—on various research projects to demonstrate the potential for information technology to help address climate change, including [Business of Innovating: Bringing Low-Carbon Solutions to Market](#). Learn more in [Collaboration on page 21](#).
- **The Dutch Sustainable Trade Initiative (IDH)** This multi-stakeholder initiative, aims to accelerate sustainable trade by building coalitions of leading multinationals, civil society organizations, governments, and other stakeholders. HP is helping develop a sustainability plan for electronics manufacturers located in the Pearl River Delta, China. Learn more in [Collaboration on page 21](#).
- **Center for Information Policy Leadership** In 2011, HP continued to work with the Center for Information Policy Leadership on its multiyear project to define what it means for a company to be accountable for its privacy practices. The most recently concluded [phase of the project](#) was sponsored by the Spanish Data Protection Authority, and described the governance model companies should adopt to implement accountability in the marketplace.
- **Voice of the Workforce survey** HP's annual Voice of the Workforce global survey solicits feedback from employees on issues such as the working environment at HP, and integrity and ethical practices at all levels of the company. In 2011, 78% of all employees took part in the confidential survey. Learn more in [Engaging our people on page 121](#).
- **Early Infant Diagnosis project** HP and the Clinton Health Access Initiative are working with the Kenyan government to reduce the amount of time it takes to diagnose an HIV-positive infant, allowing patients to be treated sooner. Learn more in [Health on page 151](#).
- **U.S. counterfeit legislation** Counterfeiting poses a sizable challenge to HP globally and is more sophisticated and pervasive than ever before. In 2011, we supported U.S. legislation that allows U.S. Customs to share information on suspected counterfeit imports with the rights holder. We also led initiatives around the world to educate government officials on the economic and social implications of allowing counterfeit products into a local marketplace. Learn more in [Public policy on page 158](#). Additionally, HP offers customers products and services with [privacy and data protection features](#).

See [additional examples](#) of engagement related to environmental issues.

We affiliate with or belong to numerous [membership organizations](#) focused on a wide range of global citizenship issues, and [industry associations](#), which seek to share learning and develop sector-wide approaches.

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## Eliminating conflict minerals

HP is engaging with a broad group of stakeholders seeking to eliminate the connection between trade in minerals from the Democratic Republic of Congo (DRC) and funding of armed conflict in the region.

HP was one of two companies that sent representatives to the DRC in early 2012 to meet with stakeholders, visit mines, and assess the situation on the ground. During this investigation, HP representatives (along with those of other Public-Private Alliance members) participated in a series of meetings with local stakeholders. These included separate meetings with the provincial ministers of mines of Katanga, Maniema, North Kivu, and South Kivu. We also held meetings with local civil society in Katanga, North Kivu, and South Kivu. We visited tantalite and cassiterite mines in Katanga; gold and cassiterite mines in South Kivu; and wolfram and cassiterite mines in Rwanda. Additionally, we met with UN organization MONUSCO's\* head of operations in Bukavu to understand the current situation with armed militias in the Kivu provinces.

During 2011, HP played a leading role in developing consensus comments and recommendations from a multi-stakeholder group of NGOs and socially responsible investors on this issue. These comments and recommendations were submitted to, and discussed with, the U.S. Securities and Exchange Commission.

HP also supports the Organization for Economic Cooperation and Development (OECD) due diligence guidance on conflict minerals. We are participating in a 1-year pilot implementation to test the guidance, and will provide feedback to the OECD through a series of three questionnaires and in-person multi-stakeholder meetings. Learn more in [Conflict minerals on page 87](#).

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\* MONUSCO is the United Nations Stabilization Mission in the Democratic Republic of Congo.



# Perspectives

Throughout this report, we include perspectives from external stakeholders to provide independent insights on various aspects of global citizenship and HP's performance. These are listed below, with links to the full videos or statements.

## Eileen Claussen

**President, Center for Climate and Energy Solutions (C2ES)**

Eileen describes how technologies such as HP's Managed Print Services make business sense while also benefiting the planet. [Visit our online gallery](#) of external stakeholder perspectives to see Eileen's video.



## Mark Kenber

**CEO, The Climate Group**

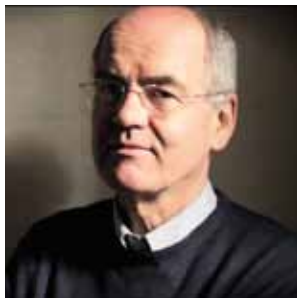
Mark thinks advances in information and communications technology led by companies such as HP can transform how we live and do business. [Visit our online gallery](#) of external stakeholder perspectives to see Mark's video.



## John Elkington

**Executive Chairman, Volans**

John sees HP drawing on its rich history, values, skills, and technologies to create new business models that help address global challenges. [Visit our online gallery](#) of external stakeholder perspectives to see John's video.



## Faris Natour

**Director, Human Rights, BSR**

Faris looks to HP to be at the forefront of businesses developing innovative approaches to addressing human rights. [Visit our online gallery](#) of external stakeholder perspectives to see Faris's video.



## Jackson Hungu

**CHAI Deputy Country Director, Kenya**

Jackson describes HP's approach to social innovation as a breath of fresh air, thanks to the company's technology and its people. [Visit our online gallery](#) of external stakeholder perspectives to see Jackson's video.



## So Sheung

**Chief Executive, Labour Education and Service Network (LESN)**

So worked with HP to help suppliers and schools educate interns about labor rights, occupational health, and other issues. Read So's [full perspective on page 113](#).





# Affiliations and memberships



HP belongs to or affiliates with many organizations that address global citizenship issues, including:

[\*\*Asia-Pacific Economic Cooperation\*\*](#), the premier forum for facilitating economic growth, cooperation, trade, and investment in the Asia-Pacific region

[\*\*BSR\*\*](#), a global nonprofit organization that helps member companies enhance business performance while respecting ethical values, people, communities, and the environment

[\*\*Center for Climate and Energy Solutions\*\*](#), an independent, nonpartisan, nonprofit organization working to advance strong policy and action to address the twin challenges of energy and climate change

[\*\*Center for Corporate Citizenship at Boston College\*\*](#), a membership-based research organization associated with the Carroll School of Management, which is committed to helping businesses leverage their social, economic, and human assets to ensure both their success and a more just and sustainable world

[\*\*The Centre for Information Policy Leadership\*\*](#), an organization that develops initiatives that encourage responsible information governance necessary for the continued growth of the information economy

[\*\*Change the Equation\*\*](#), an organization that pledges to create widespread literacy in science, technology, engineering, and math (STEM) as an investment in our nation that empowers us all

[\*\*The Climate Group\*\*](#), an independent, not-for-profit organization working internationally with government and business leaders to advance smart policies and technologies to cut global emissions and accelerate a clean industrial revolution

[\*\*Climate Savers Computing Initiative \(CSCI\)\*\*](#), a nonprofit organization committed to reducing carbon dioxide emissions through the development, deployment, and adoption of smart technologies to improve efficiency and reduce the amount of energy a computer consumes

[\*\*Clinton Global Initiative \(CGI\)\*\*](#), which convenes global leaders to devise and implement innovative solutions to some of the world's most pressing challenges—maximizing their efforts to alleviate poverty, create a cleaner environment, and increase access to healthcare and education

[\*\*Clinton Health Access Initiative\*\*](#), a global health organization committed to strengthening integrated health systems in the developing world and expanding access to care and treatment for HIV/AIDS, malaria, and tuberculosis

[\*\*Combat Climate Change \(3C\)\*\*](#), a business leaders' initiative to support the negotiation process led by the United Nations Framework Convention on Climate Change to establish a new global agreement

[\*\*Corporate Eco Forum\*\*](#), a membership organization for large companies that demonstrate a serious commitment to environment as a business strategy issue, helping accelerate sustainable business innovation and the exchange of best-practice insights

[\*\*CSR Asia\*\*](#), which builds capacity in companies and their supply chains to promote awareness of corporate social responsibility in order to advance sustainable development across the region

[\*\*CSR Europe\*\*](#), a business membership network that promotes the business case for corporate social responsibility across the region and globally

**Dutch Sustainable Trade Initiative**, a multi-sector process that aims to improve the sustainability of international supply chains

**Electronic Industry Citizenship Coalition**, a coalition of the world's leading electronics companies working together to improve efficiency and social, ethical, and environmental responsibility in the global supply chain

**EPEAT®**, a leading global registry that helps identify greener computers and other electronic equipment

**Ethics and Compliance Officer Association (ECOA)**, a nonprofit, member-driven association exclusively for individuals who are responsible for their organization's ethics, compliance, and business conduct programs

**Ethos Institute for Business and Social Responsibility**, a Brazilian nonprofit organization with a mission to mobilize, encourage, and help companies manage their business in a socially responsible way

**European Academy of Business in Society (EABIS)**, a network of companies and business schools committed to putting business in society issues at the heart of management practice

**European e-Skills Association**, an organization representing the information and communications technology sector's contribution to the development and implementation of a long-term e-skills and digital literacy agenda in Europe

**European Recycling Platform (ERP)**, the first ever pan-European take-back scheme to effectively implement the European Union's Waste Electronic and Electrical Equipment (WEEE) Directive

**Forest Stewardship Council (FSC®)**, an independent, nongovernmental, not-for-profit organization established to promote the responsible management of the world's forests

**Global Business Initiative on Human Rights (GBI)**, an initiative led by major global corporations to support action-learning activities that promote the implementation of the UN Guiding Principles on Business and Human Rights

**Global e-Sustainability Initiative (GeSI)**, an independent, nonprofit association that fosters global and open cooperation, informs the public of its members' voluntary actions to improve their sustainability performance, and promotes technologies that advance sustainable development

**Global Forest Trade Network (GFTN)**, the World Wildlife Fund's (WWF's) initiative to eliminate illegal logging, improve the management of valuable and threatened forests, and create a new market for environmentally responsible forest products

**Global Social Compliance Programme**, a business-driven program for the continuous improvement of working and environmental conditions in global supply chains

**The Green Grid Association**, a nonprofit, open industry consortium of global IT companies, policy makers, and end users seeking to improve energy efficiency in data centers and unite industry efforts to develop a common set of metrics, processes, and new technologies

**International Climate Change Partnership (ICCP)**, a global membership-based coalition of companies and trade associations committed to constructive and responsible participation in the international policy process concerning global climate change

**Junior Achievement**, the world's largest organization dedicated to educating students about workforce readiness, entrepreneurship, and financial literacy through experiential, hands-on programs

**National Association for Environmental Management (NAEM)**, a nonprofit, nonpartisan professional association dedicated to educating corporate environmental, health and safety, and sustainability decision makers

**Public-Private Alliance for Responsible Minerals Trade**, a joint initiative between governments, companies, and civil society to support supply chain solutions to conflict minerals challenges in the Democratic Republic of Congo (DRC) and the Great Lakes Region (GLR) of Central Africa

**The Sustainability Consortium**, an independent organization of diverse global stakeholders who work collaboratively to build a scientific foundation that drives innovation and improves the sustainability of consumer products throughout all stages of their life cycle

**Sustainable Silicon Valley**, an organization leading Silicon Valley to a more sustainable future through collaboration with local government agencies, businesses, and community organizations to identify and address the highest-priority environmental issues

**United Nations Global Compact**, a voluntary and strategic policy initiative for businesses that are committed to aligning their operations and strategies with 10 universally accepted principles in the areas of human rights, labor, environment, and anti-corruption

**U.S. Green Building Council**, a nonprofit organization committed to a prosperous and sustainable future through cost-efficient and energy-saving green buildings, including LEED® certification for data centers

**World Economic Forum**, an independent, nonprofit foundation committed to improving the state of the world by engaging societal leaders in partnerships to shape global, regional, and industry agendas

**World Resources Forum**, a science-based platform to exchange knowledge about the economic, political and environmental implications of global resource use

**WWF Climate Savers**, the World Wildlife Fund's (WWF's) initiative to mobilize multinational companies to voluntarily reduce greenhouse gas emissions and promote the business case for energy efficiency and clean technology

# Policies



## Accessibility

- [HP Accessibility Policy](#)

## Business ethics

- [HP Standards of Business Conduct](#)

## Corporate governance

- [Corporate Governance Guidelines](#)

## Diversity

- [HP Nondiscrimination Policy](#)
- [HP Harassment-Free Work Environment Policy](#)

## Environment

- [Environmental, Health, and Safety Policy](#)
- [Environmentally Preferable Paper Policy](#)
- [Hardware Recycling Standards](#)
- [Printing Supplies Recycling Policy](#)

## Global citizenship

- [HP Global Citizenship Policy](#)

## Human rights

- [HP Global Human Rights Policy](#)

## Labor practices

- **HP Best Work Environment Policy** Defines the standards of personal conduct that we expect employees to meet to contribute to a positive, productive work environment.
- **HP Open Door Policy** HP's open door policy commits us to create a workplace where everyone's voice is heard, issues are promptly raised and resolved, and communication flows across all levels of the company.

## Privacy

- [HP Global Master Privacy Policy](#)

## Products

- [HP General Specification for the Environment](#)

## Supply chain

- [HP Supply Chain Social and Environmental Responsibility Policy](#)
- [HP Electronic Industry Citizenship Coalition \(EICC\) Code of Conduct](#)

# Environment

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At HP, we strive to improve the environmental performance of our customers, our supply chain, and our own operations. Through Positive Impact—HP's drive to help conserve more than we as a company consume—we give people the tools and solutions to build a better today while preparing to address the challenges of tomorrow.

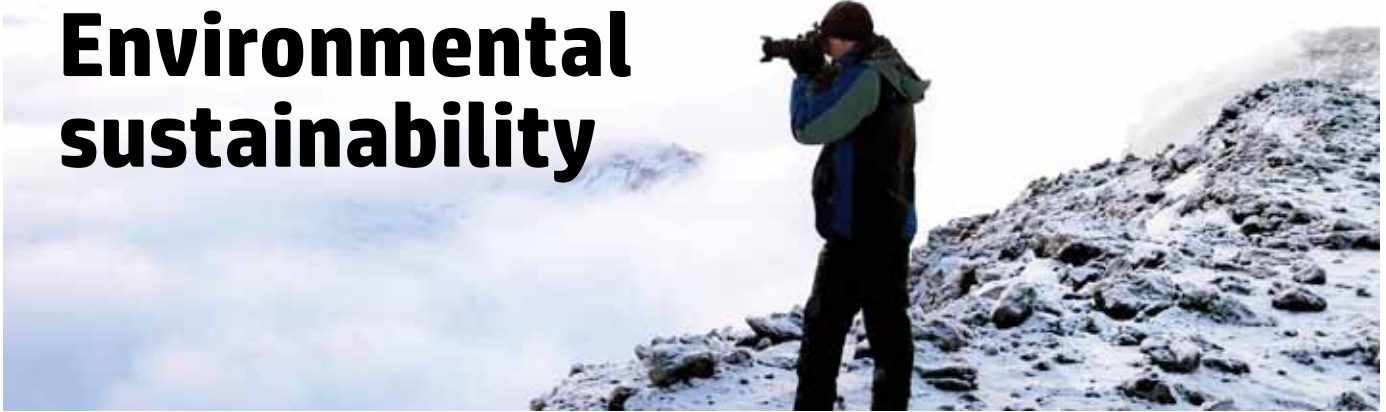


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75	Goals: environment



# Environmental sustainability



In 2011, the global population passed 7 billion on its way to a projected 9.3 billion by 2050—a rise that's creating many challenges.<sup>1</sup> None may be more critical than balancing the demands of economic growth with the need for long-term environmental sustainability. As more people strive for greater prosperity, we're facing increasing pressure to do more with finite resources.

As the world's largest provider of information technology (IT) infrastructure, software, services, and solutions, HP is in a unique position to respond to this challenge. We see unprecedented opportunities to transform the way the world lives and works—while advancing our business and helping our customers thrive.

## Aiming for Positive Impact

Positive Impact is HP's drive to help conserve more than we as a company consume. We are applying our scale, portfolio, and partnerships both to reduce our own environmental impact and to help customers be more efficient and adopt more sustainable processes and behaviors.

We are taking a two-pronged approach toward Positive Impact. First, we're improving the [efficiency of our portfolio](#), supply chain, and operations. Information and communications technology accounts for approximately 2% of the world's greenhouse gas (GHG) emissions, a share that's expected to climb with population growth and expanding use of technology.<sup>2</sup> By [using less energy](#) and other resources, HP and our industry can help keep these emissions in check, as well as save money, spark innovation, lower reputational risk, and open up new markets.

However, we see an even bigger opportunity in using technology to reduce the other 98% of GHG emissions. Developing HP solutions that improve or replace current energy- and resource-intensive processes and behaviors with more efficient alternatives is core to our aspiration for Positive Impact.

<sup>1</sup> "Total Midyear Population for the World: 1950–2050," U.S. Census Bureau, International Data Base. Accessed February 4, 2011, [www.census.gov/ipc/www/idb/worldpop.php](http://www.census.gov/ipc/www/idb/worldpop.php).

<sup>2</sup> SMART 2020: Enabling the low carbon economy in the information age, page 17, 2008, [www.smart2020.org/\\_assets/files/02\\_Smart2020Report.pdf](http://www.smart2020.org/_assets/files/02_Smart2020Report.pdf).

### Highlights

# 20%

Reduction in GHG emissions from operations between 2005 and 2011, meeting our 2013 goal 2 years early.

# 50%

Reduction in energy consumption of our products by the end of 2011 compared with 2005 levels—exceeding our original goal of a 40% reduction.\*

# 33%

The recycled plastic used in Original HP ink cartridges has up to a 33% smaller carbon footprint than the virgin plastic used in Original HP ink cartridges.\*\*

\* The average energy consumption of HP products is estimated using high-volume product lines representative of the overall shipped product volume. Energy consumption has been estimated in 2005 and annually since. The high-volume product lines include notebook and desktop computers, inkjet and LaserJet printers, and industry-standard servers.

\*\* For cartridges produced in 2010 and beyond. Based on a 2010 life cycle assessment (LCA) performed by Four Elements Consulting and commissioned by HP. The study compared the environmental impact of using polyethylene terephthalate (PET) plastic with the environmental impact of using recycled PET to manufacture new Original HP ink cartridges. For details, see [www.hp.com/go/RecycledPlasticsLCA](http://www.hp.com/go/RecycledPlasticsLCA).

Continuous innovation and collaboration with our customers and partners is central to how we develop and apply these solutions. It's also vital to how we advance responsible practices and standards across our global operations and supply chain as our business grows.

## Helping customers do more while using less

We are pioneering solutions that either improve on existing technologies or replace them with more efficient alternatives, such as [enterprise energy and resource management](#), [sustainable data center projects](#), cloud infrastructure and services such as [MagCloud](#), and [other cloud computing solutions](#).

Used effectively, technology can ultimately contribute to a net positive impact in the consumption of resources and energy. A 2011 life cycle assessment (LCA) issued by HP on [digital vs. offset book publishing](#) offers a prime example. Compared with offset-only printing, digital print technology makes it easier to better align printing with demand and helps to reduce the book-return rate.<sup>3</sup> This could reduce the potential environmental impact of producing and selling paperback bestsellers by 17% in carbon dioxide equivalent (CO<sub>2</sub>e). See the sidebar for more information about HP digital printing solutions.

Another example is HP Visual Collaboration—a high-definition, immersive, videoconferencing solution that was divested to Polycom, Inc. in 2011. As part of this agreement, the two companies are working together on solutions to provide customers with Polycom® RealPresence® video solutions and software infrastructure deployed on HP networking and systems.<sup>4</sup> Over the 3 years prior to divestiture, Visual Collaboration helped HP and its customers reduce about 175,000 tonnes in CO<sub>2</sub>e emissions—comparable to eliminating more than 143,000 round-trip flights between New York and London.<sup>5</sup>

As we aim for Positive Impact, we are delivering solutions to address key areas such as energy consumption while investing in sustainable technology research and development that help customers improve their lives or businesses and reduce their environmental footprint.

## Reducing the environmental impact of the IT supply chain

We embrace the challenge of improving environmental sustainability throughout our global supply chain. HP is an industry leader in helping our [product manufacturing](#), [transport](#), and [recovery partners](#) understand, improve, and report on their environmental performance. Through [collaboration](#) with our partners, as well as industry and environmental leaders, we can further reduce our extended environmental impact.

## Improving data center energy efficiency

Many data centers are inefficient, estimated to use less than half of the overall energy they consume for computing. We're reimagining those models from the ground up. We're helping customers forgo brick-and-mortar data centers with the HP POD 240a modular data center, also known as the [HP EcoPOD](#), which uses 95% less facilities energy. We're helping customers monitor and manage energy use in real time with the HP Data Center Smart Grid. Through [HP Project Moonshot](#), we're designing next-generation, extreme-low-energy server technologies. And HP Labs' [sustainable data center project](#) is a large-scale rethinking of how data centers are designed, built, and operated. In pilot tests, HP Labs is using local micro-grids of renewable energy to reduce a data center's reliance on grid power. HP expects to reduce reliance on the grid by more than 75% while significantly lowering operational costs.

## Embracing digital printing

Shifting to digital printing allows people and businesses to print only what they need, when they need it, helping to reduce unwanted prints and wasted paper. HP estimates that minimizing overruns of books, magazines, and newspapers through digital printing could reduce emissions by 114 to 251 million tonnes of CO<sub>2</sub>e each year.\* We're also developing printing technology innovations that consume fewer resources other than energy and paper. [HP Photosmart Minilab printers](#) eliminate up to 2,484 liters of wastewater per year, compared with silver halide photo systems tested.\*\*

\* [Reducing the Greenhouse Gas Emissions of Commercial Print with Digital Technologies](#), 2009, page 2.

\*\* Based on a 2010 LCA performed by Four Elements Consulting and commissioned by HP. The study compared the impact of using HP ML1000D, HP ML2000D, and HP Microlab pm2000e printers with the impact of using Fuji Frontier 350 and Noritsu QSS-3212 printers to produce 375,000 4 x 6-inch photos a year in Europe.

We continue to expand our [reuse and recycling](#) programs to improve availability, reduce waste resulting from the operations, and capture value from IT products at end of life. For example, we have used the plastic of more than 1.8 billion recycled plastic bottles and plastic from recycled HP ink cartridges to create over 1 billion new Original HP ink cartridges with our "closed loop" cartridge recycling process. By recycling these plastic bottles, we have diverted 24,000 tonnes of waste from landfills and reduced GHG emissions equivalent to 17,000 tonnes of carbon dioxide (CO<sub>2</sub>).

## Addressing our own environmental footprint

Responsibly managing our own [operations](#) is a cornerstone of our commitment to environmental sustainability. Across our global operations, we continually work to reduce energy consumption, GHG emissions, paper use, water consumption, and waste. In 2011,

<sup>3</sup> When printing 500,000 copies of a 240-page mono color paperback book, duplexed with 5% coverage. First 450,000 copies printing using the Timson Offset Press, with supplemental short runs of 1,000 copies using the Digital T200 press. This assumes book return rate of 25% for offset printing, 5% for digital printing.

<sup>4</sup> Polycom is an exclusive partner for certain video collaboration solutions for HP's internal use and resale to its broad customer base, which is further helping to reduce travel and emissions.

<sup>5</sup> For air travel avoidance, an average of 1,609 miles each way per round-trip (average of short-, medium-, and long-haul flights at HP), and a weighted average CO<sub>2</sub> footprint per mile of 199g CO<sub>2</sub>e is used. Car travel to/from airport on both ends is also considered. Of the 35% of meetings that avoid travel, only 1.4 persons are assumed to avoid travel in each meeting. Usage depends on a company's travel and meeting policies.



GHG emissions from our operations (not including travel) equaled a 20% reduction from our 2005 baseline, meeting our goal 2 years early (learn more in [Energy and GHG emissions on page 53](#)). Additionally, we completed energy-efficiency initiatives at our client-serving (or “trade”) data centers that we project will save approximately 13 million kilowatt hours (kWh) and avoid an estimated 7,200 tonnes of CO<sub>2</sub>e emissions on an annual basis. That’s the equivalent of removing 1,758 passenger vehicles from the road for 1 year.<sup>6</sup>

## Easing demand on freshwater sources

Since 2007, HP’s facilities in Singapore have been using “New Water” to reduce demand on freshwater. New Water is treated wastewater that is purified using microfiltration, reverse osmosis, and ultraviolet treatment, as well as conventional treatment processes. The water is potable but is mostly used by industries requiring high-purity water. New Water accounts for more than two-thirds of the facilities’ annual water consumption and is 20% cheaper than standard potable water, helping us to save more than \$3.5 million USD since 2007.

In 2011, HP ranked in the top-scoring 10% of S&P 500 companies by the Carbon Disclosure Project and was listed on their Carbon Disclosure Leadership Index (CDLI). To learn more, read the [CDLI report](#).

## Eileen Claussen

**President, Center for Climate and Energy Solutions (C2ES)**

Eileen describes how technologies such as HP’s Managed Print Services make business sense while also benefiting the planet. [Visit our online gallery of external stakeholder perspectives to see Eileen’s video.](#)



# Collaboration

Collaboration is essential to developing shared solutions for complex environmental challenges. HP works regularly with governments, nongovernmental organizations (NGOs), and other technology companies to understand the environmental issues involved, address the needs and concerns of stakeholders, search for effective solutions, and enact policies and practices that require a collective approach to work on a large scale. Through these efforts, we focus on such goals as improving resource efficiency, continually advancing standards for product development, and addressing the causes of climate change.

## HP Executive Environmental Advisory Council

In 2010, we established the HP Executive Environmental Advisory Council (EEAC) to provide objective environmental counsel to HP leadership. The EEAC’s insights help us better evaluate opportunities, set priorities, and assess progress in such areas as [energy efficiency](#), [product reuse and recycling](#), and [supply chain responsibility](#).

The EEAC provides a forum to:

- Solicit expert feedback to inform HP’s environmental strategies.
- Deepen HP’s understanding of major environmental trends.
- Offer thought leaders a preview of HP’s sustainability-focused research and innovation.
- Help HP to expand and evolve environmental programs.

In 2011, the EEAC recommended that HP more broadly integrate sustainability criteria into its procurement policies for nonproduction spend. One example of HP’s commitment in this vein is our commitment to undertake more sustainable procurement in our U.S. auto fleet. Through the Clinton Global Initiative’s Fleets for Change, we’ve agreed to reduce greenhouse gas (GHG) emissions from our U.S. fleet by 10% by 2015, compared with 2010 on a per unit basis. (Learn more about [HP’s involvement](#) with Fleets for Change.) The council also recommended that HP share its environmental leadership more proactively. Our 2011 outreach included such communications programs as the [HP Unlocking Your Energy](#) tour.

<sup>6</sup> U.S. EPA Greenhouse Gas Equivalencies Calculator. For details, see [www.epa.gov/cleanenergy/energy-resources/calculator.html](http://www.epa.gov/cleanenergy/energy-resources/calculator.html).

The council consists of 12 prominent business, academic, and NGO thought leaders. At the end of 2011, EEAC members included:

- Eric Brewer, Professor of Electrical Engineering and Computer Sciences, University of California, Berkeley, and Vice President of Engineering, Google
- Aron Cramer, President and CEO, BSR
- Amol Deshpande, Partner, Kleiner Perkins Caufield & Byers
- Ann Hand, CEO, Project Frog
- Steven Kline, Vice President, Corporate Environmental and Federal Affairs, and Chief Sustainability Officer, PG&E Corporation
- Peter Lehner, Executive Director, Natural Resources Defense Council
- Joel Makower, Chairman and Executive Editor, GreenBiz Group Inc.
- Dan Reicher, Executive Director, Steyer-Taylor Center for Energy Policy and Finance, Stanford University
- Steve Westly, Managing Partner, The Westly Group
- Scott Wicker, Chief Sustainability Officer, UPS
- Andrew Winston, Author and Founder, Winston Eco-Strategies
- David Yarnold, President and CEO, Audubon

## Collaborating on low-carbon best practices and solutions

HP believes governments, businesses, and other organizations must meet the challenges of climate change with ingenuity. In 2011, HP signed the [2°C Challenge Communiqué](#), demonstrating our commitment to global action on climate change, sustainable development, forest conservation, and building a green economy. Signed by hundreds of corporate leaders worldwide, the communiqué calls for international government action to stabilize global average surface temperatures at a maximum 2°C above preindustrial levels.

Additional examples of our collaborations in 2011 include:

### Center for Climate and Energy Solutions

HP provided funding to the [Center for Climate and Energy Solutions \(C2ES\)](#)—formerly the Pew Center on Global Climate Change—to launch *Business of Innovating: Bringing Low-Carbon Solutions to Market*. Released in October 2011, the study documents the challenges and best practices of companies dedicated to addressing climate change. HP was one of four multinational companies featured in detailed case studies. The report focused on two low-carbon HP innovations in particular: HP Visual Collaboration videoconferencing<sup>1</sup> and [Managed Print Services \(MPS\)](#). Read more about our [energy and climate strategy](#).

## World Wildlife Fund (WWF)

In 2011, HP Canada expanded its collaboration with WWF Canada by providing financial, technical, and consulting expertise for WWF's [Living Planet @ Work](#). Launched in late October, the program provides free resources to businesses to help engage employees in “green” initiatives. The program included close to 100 business members by the end of 2011. Learn more about the [relationship between HP Canada and WWF Canada](#).

HP is also a member of WWF's [Global Forest and Trade Network \(GFTN\)](#), which aims to expand the market for environmentally responsible forest products. HP signed the GFTN's Corporate Tiger Declaration in early 2011. Corporate signatories agree to reduce their impact on global tiger habitats through the responsible procurement of wood and paper.

## Forest Stewardship Council

In 2011, HP became an official member of the [Forest Stewardship Council \(FSC®\)](#), an independent NGO and certifying body that promotes responsible management of the world's forests. In 2009, we set a goal that 40% or more of HP-branded paper sold would be FSC certified or have more than 30% postconsumer waste content by the end of 2011. We met our goal this year, and established a new goal for 2015. Read more about our [paper policy and practices](#).

## Other collaborative efforts

To advance environmental sustainability, HP engaged in several other collaborative relationships in 2011, including the following:

- Participating in The Sustainability Consortium (TSC) to develop a consistent, transparent methodology for sharing information on the sustainability of notebooks, desktops, monitors, and televisions based on a life cycle approach. HP is also working with the TSC Paper Working Group to develop environmental assessment tools for paper.
- Developing a transparent, objective product carbon footprint (PCF) methodology for notebooks, desktops, and monitors in collaboration with the Massachusetts Institute of Technology (MIT), NGOs, and other original equipment manufacturers (OEMs). See [Life cycle assessment on page 31](#) for more information on our PCF research.
- Contributing to the development of the EPEAT® standard for imaging and printing products in collaboration with other technology stakeholders and the Green Electronics Council.
- Working with other stakeholders, the U.S. Environmental Protection Agency, and the U.S. Department of Energy to revise the ENERGY STAR® standard for both printers and computer servers, and to develop a new ENERGY STAR standard for data center storage.
- Working with the U.S. Green Building Council on new LEED® standards for data centers and with the Green Grid Association (as a board member) on new data center protocols.

<sup>1</sup> HP divested its HP Visual Collaboration business to Polycom, Inc., in July 2011.

- Contributing to the development of the Greenhouse Gas Protocol Product Life Cycle Accounting and Reporting Standard.
- Collaborating with the NGO Camara to support the [East African Computer Recycling \(EACR\) facility](#) in Mombasa, Kenya, which processes end-of-life electronics equipment while creating employment in disadvantaged communities.

- Partnering with the Canada-based Lavergne Group to support a new HP plastic treatment facility in Vietnam, expanding the “closed loop” HP ink cartridge recycling program. Read more about [our work with recycling vendors in developing countries](#).

Learn more about how HP’s approach to [stakeholder engagement](#) helps us address a broad range of environmental and social challenges.

# Employee engagement

Around the world, HP creates opportunities for employees to learn about, demonstrate, and share environmental practices that benefit their professional and personal lives. The HP Sustainability Network is the centerpiece of our approach and, with thousands of members, is among the largest employee network groups at HP. The network expanded from 29 chapters in 2010 to 36 in 2011.

Located in 13 countries, the chapters coordinate a wide range of efforts including several [alternative commute programs](#), local volunteering efforts, on-site composting, educational workshops, and local site events for World Environment Day and Earth Day. During 2011, 17 sites around the world ran World Environment Day or Earth Day events that were attended by thousands of employees.

In 2011, the network set up a global steering committee to improve effectiveness and manage growth, increase stakeholder support and communications, and offer activities to more individuals in more countries. The committee coordinates with HP’s Sustainability and Social Innovation team to ensure alignment.

During the year, the network encouraged the growth of employee-led horticultural users groups (HUGs) worldwide. HUGs foster activities such as seed exchanges, tree planting in local communities, classes on how to eat locally, and lessons on how to work with local farmers’ markets. Six sites—in Australia, Canada, the United Kingdom, and the United States—have employee vegetable gardens.

We have other initiatives as well to encourage employees to engage on environmental issues. In 2011, we combined HP Canada’s Green Advocates program with the Eco Solutions Advocate program in the United States. This created the HP Eco Advocate program, which helps employees communicate the company’s environmental initiatives to customers and the community. Through the initiative, we trained more than 1,300 HP employees on environmental topics. In 2012, we plan to expand the Eco Advocate program into other regions and are incorporating elements into our sales training.

“The Eco Advocate program has enabled me to channel my passion for all things green into creating a business advantage for HP. I know my customers look to me for expertise in this area, and the program helps me to provide that knowledge.”

—Hilde Allman, Technology and Business Process Consultant, Printing and Personal Systems, HP Canada

“The knowledge and confidence the Eco Advocate program fosters is awesome. It has allowed me to educate my customer base—and has helped our procurement and IT staff to win deals.”

—Adam Hughes, Commercial Account Manager, Printing and Personal Systems, HP Canada

## HP employees making an impact: Frances Edmonds

Frances Edmonds, director of environmental programs for HP Canada, supports World Wildlife Fund (WWF) in helping other businesses become more sustainable. Learn more about [Frances Edmonds on page 137](#).

## Phillip Kong

Phillip Kong brings his passion for environmental sustainability to both his job as a Green Practice Consulting Manager for HP Enterprise Services, and as the global lead for the HP Sustainability Network. Learn more about [Phillip Kong on page 141](#).

# Energy and climate

## The opportunity

Energy drives the global economy and nearly every aspect of modern life. With consumption forecast to rise nearly 50% by 2035,<sup>1</sup> the world needs solutions that improve efficiency to keep pace with demand—as well as reduce emissions that fuel climate change.

Investing in energy efficiency is sound business strategy as well. According to McKinsey & Co., the average internal rate of return on energy efficiency projects is 17%, which could yield energy savings up to \$900 billion USD annually by 2020 in the United States alone.<sup>2</sup>

At HP, we believe this represents an enormous opportunity to deliver energy-efficient information technology (IT) infrastructure, and to innovate IT solutions that provide people and businesses with better insight into and control over their energy use.

Energy efficiency also helps mitigate climate change. According to The Climate Group, information and communications technologies (ICT) could save 7.8 billion tonnes of carbon dioxide equivalent (CO<sub>2</sub>e) in 2020, representing 15% of global emissions. We believe enabling customers to better understand and improve their energy use can reduce costs, but also help them make better choices. Thanks to smart meters, energy management systems, and other emerging technologies, the data to guide those decisions is increasingly available.

## Using IT to improve energy-efficiency

At the same time, the rapidly growing volume of energy consumption data is challenging to manage and use. As the world's largest provider of IT infrastructure, software, services, and solutions to individuals and organizations of all sizes, HP is in a unique position to help customers turn energy-consumption data into usable information, enabling them to develop more efficient and productive operations that use less energy and reduce associated greenhouse gas (GHG) emissions.

For example, [HP Energy and Sustainability Management \(ESM\)](#) is designed to help enterprise customers measure and manage energy use and other resources across their facilities, IT, supply chain, and workforce. And for individual users, [HP Power Assistant](#) makes it easy to monitor and reduce PC energy consumption, operating costs, and CO<sub>2</sub>e impact, without affecting productivity.

We also focus on the supply side of the equation. Utilities are challenged to manage and make sense of the vast amount of the data generated by a proliferation of smart meters, which gather and communicate data on energy use in virtually real time. Improving their operations and better serving customers hinges on effectively capturing, storing, analyzing, and acting on that data.

[HP Smart Grid Solutions](#) enable utilities and other partners to design and deploy dynamic pricing programs and energy-efficiency, conservation, and demand-response programs. With operational improvements, utilities can limit outages and develop business plans that can defer the build out of new generation and transmission infrastructure.

## Energy-efficient IT

In addition to developing solutions that better measure and manage energy use, HP is committed to improving energy efficiency across our portfolio of products, from desktop PCs and printers to data centers. In fact, [HP's product portfolio](#) is on average 50% more energy efficient today than it was in 2005.

We're also delivering solutions that replace inefficient technologies with more productive and sustainable alternatives. For example, [HP thin clients](#) enable computing on a "virtual desktop" residing on a central server. Users access the virtual environment through a simple and efficient desktop device that contains no hard drives or other moving parts, relying on the server for all computing resources. Replacing 2,000 desktop PCs and monitors made in 2005 with the same number of HP thin client solutions—including the required servers—would cut energy consumption by 74% and save an estimated 795,000 kilowatt hours (kWh) per year.<sup>3</sup>

### Mark Kenber CEO, The Climate Group

Mark thinks advances in information and communications technology led by companies such as HP can transform how we live and do business. [Visit our online gallery of external stakeholder perspectives to see Mark's video.](#)



<sup>1</sup> [www.eia.doe.gov/oiaf/ieo/index.html](http://www.eia.doe.gov/oiaf/ieo/index.html).

<sup>2</sup> [www.mckinsey.com/Insights/MGI/Research/Natural\\_Resources/The\\_case\\_for\\_investing\\_in\\_energy\\_productivity](http://www.mckinsey.com/Insights/MGI/Research/Natural_Resources/The_case_for_investing_in_energy_productivity).

<sup>3</sup> The technology refresh takes 2005 desktops and monitors in an enterprise setting and replaces them 1:1 with HP t5570 Thin Clients and new HP Compaq LE19 WLED monitors. In the background, a set of HP DL460cG7 blade servers and a rack of storage disks support the new thin clients (about 70 thin clients to one blade server).

## Energy and the data center

As demand for computing resources increases, companies are relying more heavily on data centers, increasing energy use. According to the 2011 Data Center Industry Census, the world's data centers will consume 19% more energy in 2012 than in 2011. Total power use will reach about 31 gigawatts, equivalent to the energy used by all the residential households in France, Italy, or the United Kingdom.<sup>4</sup>

To help slow this trend, HP is helping customers rethink the data center from design through operational management. [HP Critical Facilities Services \(CFS\)](#) provides consulting, design, and engineering services for new or retrofitted data centers. Our approach helps align IT, facilities, and operations with data-center capacity and flexibility to meet business needs and manage environmental impact.

One challenge is that traditional data centers can be over provisioned and under used, resulting in wasted energy and money. Virtualization offers one solution. By consolidating many servers into a single machine, virtualization can dramatically reduce the energy demands of a data center while increasing its capacity and performance. Another solution is modular design, which helps enterprises rapidly and efficiently expand data-center capacity. One example is the HP POD 240a, also referred to as the [HP EcoPOD](#)—a compact, self-contained, modular, ultraefficient data center.

The availability of usable performance data is also key to saving energy. The [HP Data Center Smart Grid](#) creates an intelligent, energy-aware data center using interconnected sensors that detect when power is being wasted, allowing IT managers to make adjustments in real time. This powerful management tool can reduce a facility's power and cooling costs by up to 30%.

HP is also developing data centers based on a more efficient cloud-based infrastructure. This enables servers to use and share resources more efficiently, getting more work out of each kWh used.

Looking to the future, the sustainable data center project is a large-scale rethinking of how data centers are designed, built, and operated. Managed by HP Labs, the company's central research arm, the aim is to develop a facility that consumes [net-zero energy](#) from nonrenewable sources over its entire life cycle—from resource extraction and manufacturing to operation and end of life. This means moving away from sources like the public power grid and relying on local microgrids of renewable energy to offset all or most of a data center's energy needs. HP Labs has also created an IT infrastructure that dynamically allocates resources to shape demand, so the data center receives the resources it needs when it

needs them—and no more. In pilot tests, HP Labs is using local microgrids of renewable energy to reduce a data center's reliance on grid power. HP expects to reduce reliance on the grid by more than 75% while significantly lowering operational costs—contrary to the view that sustainability requires companies to “pay more to be green.” This shift to renewable energy microgrids can reduce a data center's carbon footprint by an equivalent 75%.

HP technology, services, and solutions can help transform how the world lives and works. We make it possible for customers to grow responsibly and to be more productive while being conscious of the environment and efficient with resources. For HP, this alignment of business and environmental benefits is core to creating a [Positive Impact](#), HP's drive to help conserve more than we as a company consume.

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### HP employees making an impact: Sundeep Khisty

As the lead for HP Carbon Emissions Management Service, Sundeep Khisty shows enterprise clients how to measure and reduce their carbon footprints. [Learn more about Sundeep Khisty on page 140.](#)

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## Energy and GHG emissions across HP's business

We're committed to making our global operations more energy efficient, seeking low-carbon energy sources where possible. In 2011, we implemented a software platform from [Hara](#), a provider of energy and sustainability management software, to automate energy and sustainability data collection across 770 HP sites worldwide. Learn more in [Energy efficiency on page 55.](#)

[HP ESM](#) group is also involved in this global implementation. The ESM group will apply the insights and best practices they gain to benefit other customers undertaking similar deployments.

HP works to manage and decrease energy use and GHG emissions throughout our business (see table below). From manufacturing and operations to product transport, use, and recycling, HP recognizes the importance of environmental sustainability in our products, services, and practices.

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<sup>4</sup> [2011 Data Center Industry Census](#), DataCenterDynamics.



## GHG emissions across HP's business, 2011\*

Category	2011 emissions [tonnes CO <sub>2</sub> e]	Level of influence**	Our actions
<a href="#">Product manufacturing</a>	4,800,000***	Medium	We work with our direct suppliers to report and reduce their energy use.
<a href="#">HP operations</a>	1,856,400	High	In managing our facilities and data centers, we strive to reduce energy consumption and purchase energy from renewable sources.
<a href="#">HP employee business travel</a>	461,600	High	Our travel policies and use of online virtual meetings and videoconferencing decrease business travel.
<a href="#">Product transport</a>	1,900,000	Medium	We enhance distribution networks and convert to lower-energy transport modes where appropriate. Improved packaging reduces waste and weight, saving shipping fuel and cutting GHG emissions.
<a href="#">Product use</a>	Based on customer energy use of sold products, approximately an order of magnitude more than emissions from HP operations	Medium	We design products, software, and services that help customers use less energy.
<a href="#">Product recycling (CO<sub>2</sub>e avoided)</a>	250,000****	Medium	We offer customers a range of reuse and recycling services, resulting in reduced GHG emissions.

\* Includes direct measurements as well as estimates.

\*\* Refers to the level of influence HP has on this category of emissions.

\*\*\* 2010 is the most recent year for which this data is available.

\*\*\*\* According to the U.S. Environmental Protection Agency's [Waste Reduction Model \(WARM\) Tool](#), CO<sub>2</sub>e reductions from recycling are calculated per the following formula: 1.858 kg CO<sub>2</sub>e/kg recovered electronic waste.

## Working with others

We [collaborate](#) with government agencies, nongovernmental organizations (NGOs), universities, and peer technology companies to improve our own performance, develop standards to advance the industry, and contribute to advanced research in energy and sustainability.

HP supports international action to address climate change and minimize the risks of serious environmental, economic, and social impact. Because we believe that energy-efficient HP technology can be a catalyst in meeting the challenge of climate change, we again participated in the United Nations Climate Change Conference (COP 17). For the second consecutive year, HP was selected as the primary provider of low-carbon IT solutions for the conference.

HP is an official signatory of The [2°C Challenge Communiqué](#), a statement from more than 400 international businesses that calls on governments to take action at a national level to ensure a successful transition to green growth and a climate-resilient economy.

## HP Unlocking Your Energy

In 2011 we hosted a series of [HP Unlocking Your Energy](#) events to showcase innovative HP products, services, and solutions that help consumers, enterprises, and entire industries reduce their energy consumption, cut carbon emissions, save money, and boost productivity.

Academics, NGO leaders, industry analysts, journalists, and sustainability experts attended the events, providing a forum for new thinking and dialogue on the opportunities for IT to reduce energy use and advance sustainability.

Learn more about the [HP Unlocking Your Energy event in London](#).



# Paper

As the world's largest information technology (IT) company, with one of the industry's most extensive supply chains, HP is committed to the responsible sourcing and use of paper products throughout our operations and to reducing the environmental impact associated with producing the paper that we sell. We work with leading environmental organizations to promote responsible forestry practices, increase the use of sustainably sourced paper, and encourage broader recycling. And as a leading supplier of imaging and printing equipment, we deliver product innovations that make it easy for our customers to reduce paper waste.

Our [Environmentally Preferable Paper Policy](#) details HP's principles for buying, selling, and using paper and paper-based packaging. We seek to source paper from suppliers who demonstrate responsible forestry and manufacturing practices. Our environmental strategy for [packaging](#) prioritizes renewable, recycled, and recyclable materials. Consequently, we have shifted many products to paper and molded-pulp packaging that is made from responsibly sourced fiber.

## Responsible paper sourcing and sales

HP sells approximately 260,000 tonnes of HP-branded printer and copier papers annually. We require suppliers to verify the source of pulp used in HP-branded papers so we can be confident that it is legally and responsibly sourced. We are working to increase both the percentage of postconsumer recycled fiber in HP-branded papers and our use of pulp that is certified as sustainable by the Forest Stewardship Council (FSC®)—widely regarded as the leading independent standards organization for responsible forestry.

HP became an FSC member in 2011, helping to shape the council's policies and criteria, and we strongly encourage our paper suppliers to pursue FSC certification. We also achieved our goal of having at least 40% of HP-branded paper be FSC-certified<sup>1</sup> and/or contain at least 30% postconsumer waste (PCW) content by the end of 2011. HP's new goal is that 50% or more of its branded papers will meet one or both of these criteria by the end of 2015. The majority of our photo papers and specialty papers have achieved [FSC "chain of custody"](#) (CoC) certification (SCS-COC-002255), demonstrating that the paper's fiber originates from a forest that is responsibly managed in accordance with FSC principles and criteria.

HP has a preference for offering FSC-certified papers. Where FSC-certified pulp is not currently available, HP offers papers certified by the Programme for the Endorsement of Forest Certification or the Sustainable Forestry Initiative.

To learn more about certifications for specific HP-branded paper products, as well as the percentage of recycled content in our papers, see the "Media Supplies" section of [HP Eco Highlights Products](#).

HP is also a member of the World Wildlife Fund's Global Forest and Trade Network, through which we gain valuable expertise to help us achieve our responsible paper-sourcing goals. (Read more about [collaboration](#) on environmental issues between HP and its stakeholders.)

We have implemented HP's Environmentally Preferable Paper Policy with our suppliers of HP-branded papers, and we encourage paper manufacturers to implement environmental management systems such as ISO 14001. Our efforts include working with major paper suppliers to better understand their energy and water use and their greenhouse gas (GHG) emissions so we can help these suppliers assess the potential for improvements.

For more information, see our customer brochure, [HP Home and Office Papers—Designed with the Environment in Mind](#).

## Helping customers conserve resources

HP provides technology and services to help make customers' printing and paper use more effective. We are also working to advance the analog-to-digital transformation of the printing and publishing industry, as well as in other commercial and industrial sectors that produce materials such as marketing collateral, labels, and signage. HP Digital Publishing, for example, helps publishing industry customers convert from offset book printing to digital on-demand printing. This enables book publishers to print only the volume of books required to meet demand—helping to reduce energy and resource use and avoid excess waste. (Read more in [Environmental sustainability on page 19](#).)

We also help customers to:

- Assess, understand, and reduce unnecessary paper use through the [HP EcoSMART Console and EcoSMART Fleet](#)—online tools that provide centralized access to usage data along with customizable options for saving energy and paper, and reducing carbon footprint.
- Ensure optimum paper use by taking advantage of automatic two-sided printing, and by setting two-sided printing as the default across entire print fleets through tools such as HP Universal Print Driver and [HP Web Jetadmin](#).
- Reduce paper waste by up to 55% with [HP Smart Print](#), a free online tool that helps users select and print only the webpage content they need.<sup>2</sup>

<sup>1</sup> FSC (license code FSC-C017543).

<sup>2</sup> Supports Microsoft® Internet Explorer® 7.0, 8.0, 9.0 as well as Mozilla® Firefox® version 3.5 through 5.0.1. An independent study commissioned by HP compared paper consumption using HP Smart Print with a web browser's print command. Microsoft Internet Explorer users can save up to 55% and Mozilla Firefox users (tested on v3.6.19) can save up to 15% on paper usage.

## Conserving paper across HP

We are working to lead the shift to more environmentally sustainable printing and paper use across HP. Focus areas include:

- **Paper used in our offices** We use HP Everyday Papers, which are made from pulp produced through responsible forestry practices, for internal office printing. Two-sided printing is the default for our office printers.
- **Paper shipped “in the box”** This includes manuals, guides, and warranties. We are changing specifications (for example, using smaller fonts and thinner paper), reducing document length, and switching to electronic delivery (where legally permissible). As a result, HP shipped 14,200 fewer tonnes of paper documents in 2011 compared with 2008. Learn more about our efforts to reduce [packaging](#).
- **Paper used for commercial and promotional purposes** We strongly encourage our commercial print vendors to print all HP sales and marketing materials on paper that is certified (preferably by FSC) and/or contains postconsumer recycled content. Over the past 4 years, we have switched to [Print on Demand](#) for most of our sales and marketing materials, reducing storage requirements and paper waste associated with discarding obsolete documents.

## Deinking research aids paper recycling

HP is working to improve the ability to remove inks from printed paper for enhanced recycling through research and development in innovative inks, additives, paper design, and deinking processes. For instance, the paper design and additives typically used in HP ColorLok® and HP ColorPRO papers greatly enhance inkjet deinkability. Our innovations in deinking help recycling mills transform ink-covered paper into clean, high-quality pulp for producing white recycled paper. ([See how this process works.](#))

During 2011 testing of HP Color Inkjet Web Press prints, more than 15 papers were rated as having “Good Deinkability,” based on the European Recovered Paper Council scorecard using INGEDE Method 11. We also partnered with Arjowiggins Graphic on a 2011 recycling mill trial in which we successfully deinked more than 9 tonnes of paper printed with HP Indigo inks, using the standard process of the Arjowiggins Graphic Greenfield mill. [Learn more.](#)

# Products and solutions



HP products, services, and solutions represent our greatest opportunity to advance [Positive Impact](#)—HP's drive to help conserve more than we as a company consume. Our broad portfolio helps customers use energy and other resources more efficiently, replace outmoded and inefficient processes, and live and work more sustainably. To learn more about environmental and social innovation across the infrastructure, software, services, and solutions HP offers, visit our [Tech gallery](#).

## HP's holistic approach

Through our [Design for Environment program](#), HP takes a holistic approach to reducing the environmental impact of our products and solutions across their entire life cycle—from their earliest stages of development through use and end of life. We increasingly use the insights from [life cycle assessment](#) and stakeholder consultation to increase our understanding of the environmental impact of our products, inform design, and foster innovations in materials use, manufacturing, and transport processes.

## A sustainable approach to services at HP

HP provides services that help enterprise customers measure and manage their resource consumption and carbon emissions across an enterprise's data centers, business processes, and operations. [HP Energy and Sustainability Management \(ESM\)](#) addresses the use of energy, water, and other resources across a customer's entire organization. [HP Critical Facilities Services](#) focus on improving energy consumption and efficiency, and water usage in data centers (see graphic below). And [HP Carbon Emissions Management Service](#) helps customers calculate, record, and analyze energy use and carbon emissions in every aspect of their IT infrastructure—from the desktop to the mainframe.

### Highlights

# 50%

HP achieved a 50% reduction in energy consumption of our products by the end of 2011 compared with 2005 levels—exceeding our original goal of a 40% reduction.\*

# 95%

The HP EcoPOD modular data center uses 95% less facilities energy than a traditional data center.\*\*

# 74%

Replacing 2,000 PC desktops and monitors made in 2005 with the same number of HP thin client solutions—including the required servers—would cut energy consumption by 74% and save an estimated 795,000 kilowatt hours (kWh) per year.\*\*\*

\* The average energy consumption of HP products is estimated using high-volume product lines representative of the overall shipped product volume. Energy consumption has been estimated in 2005 and annually since. The high-volume product lines include notebook and desktop computers, inkjet and LaserJet printers, and industry-standard servers.

\*\* New POD technology from HP offers 95% greater energy efficiency compared with a traditional brick-and-mortar data center, based on internal HP testing.

\*\*\* The technology refresh takes 2005 desktops and monitors in an enterprise setting and replaces them 1:1 with HP t5570 Thin Clients and new HP Compaq LE19 WLED monitors. In the background, a set of HP BL460cG7 blade servers and a rack of storage disks support the new thin clients (about 70 thin clients to one blade server).

## Sustainability initiatives across the life cycle

Learn more about how HP approaches sustainability at each stage of the life cycle, illustrated by innovations in our PC and printer products, as well as our data center services.

### Research, development, and design

HP Labs and HP's business groups attempt to develop and design products and solutions—from ink cartridges to data centers—that require less energy, use more [sustainable materials](#), and are easier to recycle than the previous generation of HP products.

### Manufacturing

HP collaborates with our manufacturing partners and suppliers to understand, reduce, and report the environmental impact of product manufacturing.

### Packaging and transport

HP strives to develop more sustainable packaging options and make transport choices to decrease fuel use and associated greenhouse gas emissions.

### Reuse and recycling

HP works with a global network of vendors in 67 countries and territories worldwide to collect, process for resale, and/or recycle returned products, as well as qualify recycled materials for use in new products.

### Use

HP strives to improve the energy efficiency and resource consumption of our products and solutions, and makes it easy for customers to consider the environment when buying and using our products.



Life cycle stage	HP Z1 Workstation <a href="#">Learn more</a> in the Tech gallery.	HP ENVY <sup>110</sup> printer <a href="#">Learn more</a> in the Tech gallery.	HP Critical Facilities Services <a href="#">Learn more</a> in the Tech gallery.
<a href="#">Research, development, and design</a>	Registered EPEAT® Gold and ENERGY STAR® qualified. The all-in-one form factor contains less plastic than a separate PC and monitor of similar size, and features a mercury-free 27-inch diagonal white LED display.	ENERGY STAR qualified e-All-in-One.	HP Energy Efficiency Analysis assesses a data center's energy efficiency and provides design and site recommendations to reduce environmental impact.
<a href="#">Manufacturing</a>	Manufactured using brominated flame retardant BFR- and polyvinyl chloride PVC-free materials.*	Manufactured using PVC-free materials.**	HP helps customers achieve certifications for the U.S. Green Building Council (USGBC) LEED® Standard for Data Centers.
<a href="#">Packaging and transport</a>	Surface transport within the United States and Canada uses a 100% SmartWay-compliant carrier network.	Surface transport within the United States and Canada uses a 100% SmartWay-compliant carrier network.	HP develops plans and procedures to help customers better maintain and test facilities, which reduce the need to transport and store spare parts and equipment.
<a href="#">Use</a>	Features up to 90% efficient power supply and helps customers conserve energy by providing real-time power consumption data with HP Power Assistant.***	Allows for optimum paper use through automatic two-sided printing.	HP provides ongoing consulting to help customers increase data center energy efficiency.
<a href="#">Reuse and recycling</a>	Designed to be more than 90% recyclable by weight.	Designed to be 90% recyclable. Uses Original HP 60 cartridges that contain up to 70% recycled plastic.	HP Asset Recovery services rebuild, reuse, and recycle outdated data center components.

\* The HP Z1 workstation meets the industry definition of "BFR/PVC-free" per the INEMI Position Statement on "Low Halogen" Electronics. Plastic parts incorporated into the chassis generally contain < 1,000 ppm (0.1%) of bromine or chlorine. Printed circuit board and substrate laminates generally contain < 1,500 ppm (0.15%) of total bromine and chlorine. Service parts after purchase may not be BFR/PVC-free. External accessories, including power supplies, power cords, and peripherals are not BFR/PVC-free.

\*\* HP ENVY<sup>110</sup> e-All-in-One is polyvinyl chloride-free (PVC-free); meeting the evolving definition of PVC free as set forth in the "INEMI Position Statement on the Definition of 'Low-Halogen' Electronics (BFR-/CFR-/PVC-free)." Plastic parts contain < 1,000 ppm (0.1%) of chlorine [if the Cl source is from CFRs or PVC or PVC copolymers]. USB cable and power cord are not PVC free.

\*\*\* HP Power Assistant enhances management of the system energy requirements and enables users to take control of their power consumption for a reduced impact on the environment. Power calculations and cost calculations are estimates. Results will vary based on variables, which include information provided by the user, time PC is in different power states (on, standby, hibernate, off), hardware configuration, variable electricity rates, and utilities provider. HP advises customers to use information reported by HP Power Assistant for reference only and to validate impact in their environment. Environmental calculations were based on U.S. EPA eGrid 2007 data found at [www.epa.gov/egrid/](http://www.epa.gov/egrid/). Regional results will vary. Microsoft® Windows® required.

# Life cycle assessment

HP increasingly uses life cycle assessment (LCA) to better understand and reduce the environmental impacts of the products we offer. LCA covers every stage of a product's life cycle, from [materials extraction](#) to [end of life](#).

Specifically, LCA techniques allow us to:

- Assess our current materials, packaging, and products; model alternatives; and target areas for improvement.

- Develop tools to [estimate the carbon footprint of our products](#) of our products
- Determine which processes, components, and materials have the greatest environmental impact and prioritize these for analysis, with the goal of reducing these impacts.
- Develop metrics to help product designers compare design options.
- Support Design for Recycling initiatives.

## LCAs for HP products

In 2011, we carried out or commissioned LCAs on several products. Examples include:

- **HP LaserJet black toner cartridges vs. remanufactured cartridges** A 2011 study commissioned by HP found that paper use during printing—not cartridge manufacturing or production—is the greatest contributor to the environmental impact of toner cartridges.<sup>1</sup> Inconsistent print quality often leads to reprinting and increased paper consumption, which increases the environmental impact associated with cartridges. As reported in a separate 2010 study, Original HP LaserJet toner cartridges are more reliable and deliver higher print quality than the remanufactured cartridges examined,<sup>2</sup> which often means fewer reprints and less paper use. The 2011 study also reported that recycling at the end-of-life phase reduces the environmental impact of toner cartridges. HP offers [recycling programs](#) for HP cartridges.
- **HP HDPE banners vs. PVC scrim banners** HP banners made of High-Density Polyethylene (HDPE)—for outdoor use on billboards and other media—can help reduce the carbon footprint of banner printing materials by up to 80% compared with traditional polyvinyl chloride (PVC) scrim banner material.<sup>3</sup> Key factors include a lighter weight that enables reduced raw material consumption as well as lower transportation<sup>4</sup> and disposal costs.<sup>5</sup>
- **Albums of printed photos vs. digital photo frames** An HP study revealed that printing 200 photos—including materials for the printer and album, energy use, and end-of-life impacts—produced just 15% of the GHG emissions of displaying 200 photos on a digital photo frame in a typical home for 2 years.<sup>6</sup>

## LCA challenges

The LCA process has its limitations in assessing information technology (IT) products, due to the use of different methodologies, inconsistent assumptions, the complexity of IT products (including the large number of suppliers providing inputs), and the rapid rate of technological innovation. These factors affect the results, reliability, and consistency of LCAs, making it challenging to accurately compare the environmental impacts of products within our industry.

## Standardizing LCA approaches and methodologies

HP is collaborating with other industry leaders, academia, nongovernmental organizations, and governments to promote and share best practices, and create universally accepted methods for performing LCAs. Our objective is to enhance product comparability across the industry and improve the use and disclosure of LCA data within our own product designs. Working with others in the IT industry also helps us reduce the environmental impacts of our shared supply chains.

Through our membership in The Sustainability Consortium (TSC) and our support for the Electronic Industry Citizenship Coalition product carbon footprint (PCF) project, we're working to develop a common approach to LCA and PCF data capture. In addition, we're collaborating with the Massachusetts Institute of Technology (MIT), as well as other original equipment manufacturers (OEMs) and suppliers, to create a Product Attribute to Impact Algorithm (PAIA) tool in order to estimate the PCF of our notebook and desktop computers, and monitors in a way that is transparent, objective, credible, and relevant to customers. The goal of the PAIA tool is to provide information to the purchaser or end consumer to facilitate discussion and understanding of a product's environmental impacts. We anticipate releasing the PAIA tool and PCF notebook data in 2012, once pertinent supplier data has been vetted.

We're also working with international groups to strengthen the PCF and LCA data capture process for imaging and printing products. In 2011, HP helped draft a commercial printing carbon footprint standard as a member of the International Organization for Standardization (ISO) technical committee working group. Similar to the goals for the PAIA project, the ISO standard will provide a transparent, universally accepted methodology to guide HP and other manufacturers when performing PCF and LCA analyses on printers and related products. The proposed standard will be up for a committee vote during 2012.

<sup>1</sup> 2011 Four Elements Consulting study, commissioned by HP, compared Original HP LaserJet CB436A and CC364A black toner cartridges with a sample of remanufactured alternatives across eight impact categories. For more information, visit [www.hp.com/go/lj-lca-na](http://www.hp.com/go/lj-lca-na) or [www.hp.com/go/lj-lca-emea](http://www.hp.com/go/lj-lca-emea).

<sup>2</sup> QualityLogic 2010 study, commissioned by HP, compared Original HP LaserJet monochrome toner cartridges with remanufactured cartridges sold in North America, Europe, the Middle East, and Africa for the HP LaserJet P1505 and P4015 printers, HP 36A, and 64A. For details, see [www.qualitylogic.com/NAremanreport.pdf](http://www.qualitylogic.com/NAremanreport.pdf) or [www.qualitylogic.com/EMEAremanreport.pdf](http://www.qualitylogic.com/EMEAremanreport.pdf).

<sup>3</sup> For example, the carbon footprint of banner printing material can be reduced by up to 80% using 170 g/m<sup>2</sup> (5-ounce) HP HDPE Reinforced Banner. Calculation by the HP IPG Environmental Technology Platform Team (and confirmed by an independent environmental life cycle assessment firm), based on the activities associated with the manufacturing of the product, and comparing 200 g/m<sup>2</sup> (6-ounce) HP Double-sided HDPE Reinforced Banner to 440 g/m<sup>2</sup> (13-ounce) HP Outdoor Frontlit Scrim Banner using the Swiss Center for Life Cycle Inventories Ecoinvent 2.2 database and model IPCC 2007 version 1.02; primarily for the category of PVC/PET/HDPE, and measuring materials extraction, transportation to the manufacturing site, and GHG emissions generated during manufacturing. The reduction in carbon footprint for HP HDPE Reinforced Banner is slightly less.

<sup>4</sup> For example, HP Double-sided HDPE Reinforced Banner based on the transportation cost per square foot of material comparing a 30-roll pallet of HP Double-sided HDPE Reinforced Banner (1,067 mm x 45,7 m/42 in x 150 ft rolls, 870 lbs, 15,750 sq ft of material) and a 20-roll pallet of HP Outdoor Frontlit Scrim Banner (1,067 mm x 35 m/42 in x 115 ft, 844 lbs, 8,050 sq ft of material); using FedEx National shipping rates (Standard Service) from San Diego, California, United States, to New York, New York, United States, of \$4.77 USD/lb for 870 lbs and \$4.87 USD/lb for 844 lbs. Ground transportation costs vary by region and ship-to location. Transportation cost comparison for HP HDPE Reinforced Banner is similar.

<sup>5</sup> In many European countries such as the United Kingdom, there is a Landfill Tax payable on waste disposed of at landfills. The tax is regulated by HM Revenue and Customs. Tax on active waste amounts to £40/tonne (+VAT) in 2009–2010 and is set to increase £8/per year to 2013. According to [www.defra.gov.uk/environment/economy/waste/](http://www.defra.gov.uk/environment/economy/waste/), this is becoming a standard practice for other EU countries [www.cewep.com/data/landfill/index.html](http://www.cewep.com/data/landfill/index.html).

<sup>6</sup> "Carbon Footprint Analysis Comparing a Digital Frame to Printed Photos," Tom Etheridge and Tim Strecker.



# Research and development

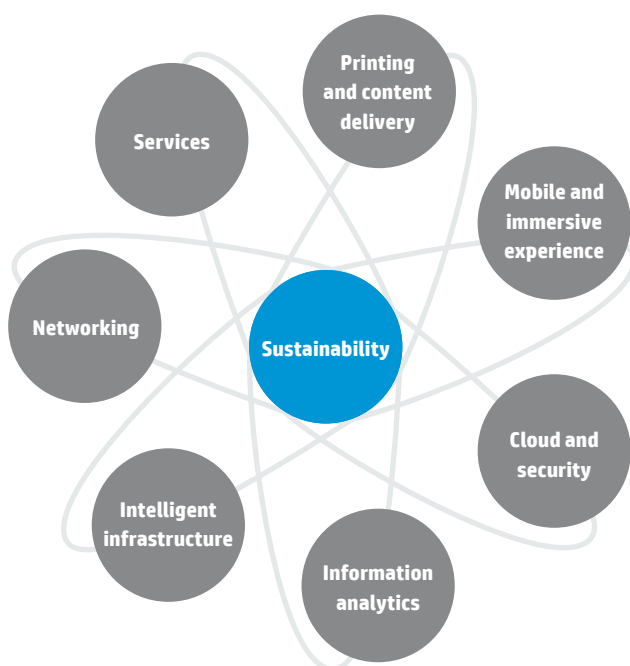
Research and development (R&D) at HP focuses on developing breakthrough technologies, spearheading the next generation of HP products and services, and creating new opportunities for HP's businesses and customers. We are committed to innovation both internally and in [collaboration](#) with leading universities and technology companies worldwide.

Innovation and R&D occurs throughout our business groups, and is essential to HP's ongoing ability to deliver leading products and services. Complementing these efforts, [HP Labs](#) is our central research organization. It aims to:

- **Deliver business value** through a variety of paths to commercialization, including technology transfer to HP businesses, demonstrations, coinnovations with customers, and licensing.
- **Drive the conversation and demonstrate thought leadership** in the industry through intellectual property (IP) generation and publications at premier academic and industry conferences.
- **Coinnovate with customers and research partners**, creating transformational solutions for real-world problems through an [open innovation](#) approach.

Sustainability is one of eight primary research categories within HP Labs (see graphic). With assistance from the Sustainable Ecosystems Research group (SERg), HP Labs integrates sustainability within every research category, helping HP create new technologies, products, services, and business models for the emerging low-carbon economy.

## HP Labs research areas



## HP employees making an impact: Chandrakant Patel

Chandrakant Patel is an HP senior fellow and interim director of HP Labs. His vision for building a more sustainable world has helped make HP a leader in energy-efficient computing. [Learn more about Chandrakant Patel on page 144.](#)

## 2011 R&D highlights

HP Labs made progress in several key areas in 2011:

### Energy-efficient data centers

HP Labs continues to research new ways of developing energy-efficient, reduced-emissions data centers, including the use of renewable technologies and alternative energy sources. The research is part of HP Labs' [sustainable data center project](#), a large-scale rethinking of how data centers are designed, built, and operated. With each low-energy innovation, HP moves closer to its goal of creating a data center that consumes net-zero energy from nonrenewable sources over its entire life cycle. HP also incorporates many of the technologies developed for the sustainable data center project into other HP products and solutions.

**Multiscale Energy Modeling tool** HP Labs collaborated with the HP Enterprise Servers, Storage, and Networking (ESSN) business group on the development of several technologies used in the [HP POD 240a](#) modular data center, also known as the HP EcoPOD. For example, the EcoPOD team used the Multiscale Energy Modeling tool—conceptualized by HP Labs and the University of Limerick in Ireland—to accurately project the EcoPOD's total energy consumption and costs. The team has also used the tool to evaluate potential EcoPOD customer sites in support of the account and technical teams. HP Labs is currently investigating how to enlist the Multi-Scale Energy Modeling (M-SEM) tool to run offline or run-time optimizations of the EcoPOD infrastructure to further improve energy efficiency.

**Fort Collins data center** In March 2011, HP opened a data center in Fort Collins, Colorado, United States, that doubles as a working test bed for HP Labs technologies, including sustainable data center innovations. The facility expands on HP's [Converged Infrastructure](#) solutions with research focused on working to eliminate information technology (IT) sprawl, increasing energy efficiency, and reducing power consumption. Recent advancements include motorized Adaptive Vent Tile technology, which makes local cooling adjustments for individual IT racks, and a cooling microgrid that employs multiple cooling resources, including a chiller plant, a water-side economizer, outside air, on-site energy storage through ice, and an integrated management system. [Learn more about our Fort Collins data center.](#)

**Cloud Sustainability Dashboard** HP has developed a Cloud Sustainability Dashboard (CSD) to help IT professionals better understand and quantify the sustainability impact of cloud computing. The dashboard provides a high-level view of the economic, environmental, and social impacts of related IT and facility resources and services, including servers, storage, networking, power and cooling, and IT support. For example, users can assess the impact of changing electricity costs by region, determine which cloud service offers the smallest environmental footprint, or examine the potential effect of cloud computing on economic development.

## Resource Management as a Service

HP Labs continues to explore how IT can help cities cope with the growing strain on nonrenewable resources. In 2011, we initiated the Resource Management as a Service (RMaaS) project—an integrated hardware, software, and services platform that can be tailored to manage energy, water, and waste at a city-wide scale. Still in its early stages, the model conceives of cities as a series of “campuses” connected by transportation and information networks. Each campus will have its own customizable hardware and software infrastructure, along with an ecosystem of sustainability “apps” that support real-time resource management based on availability and demand. HP is working on an RMaaS prototype at our HP Labs site in Palo Alto, California, United States.

## HP open innovation

HP Labs collaborates with top researchers, scientists, and entrepreneurs worldwide on high-impact joint research projects through an open innovation research model. This allows us to bring together global expertise to foster discovery, develop breakthrough technologies, and tackle the next generation of global challenges.

SERg, for example, extends its research capabilities through university collaborations, and then transfers working solutions to HP business units for product and service development. The model provides students the opportunity to work on real-world sustainability problems while gaining invaluable experience and knowledge for their future careers at HP Labs or elsewhere. Among our most notable successes is the Environmental Sustainability Assessment Tool (ESAT), which originated from a multiyear project with the University of California-Berkeley (UC Berkeley) in Berkeley, California, United States, addressing energy efficiency in the data center.

SERg is currently collaborating with such top research institutions as UC Berkeley in Berkeley, California, United States; Carnegie Mellon University in Pittsburgh, Pennsylvania, United States; Virginia Tech in Blacksburg, Virginia, United States; and the University of Limerick in Limerick, Ireland.

Visit [HP Labs](#) for more information about HP’s innovation for the environment and other research areas.

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## HP Labs and social innovation

HP Labs and our business groups’ R&D teams also further social innovation by providing solutions to improve healthcare access and delivery, enhancing the quality of life for individuals and communities worldwide. Learn more about [Social innovation on page 147](#).

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# Design

HP considers the environment in designing its products and solutions, from the smallest ink cartridge to entire data centers. We emphasize sustainability principles when selecting the [materials](#) for our products and [packaging](#), assessing the resources required for [transporting products](#), determining how they will function during [use](#), and facilitating their [reuse and recycling](#).

This holistic design approach extends to how we deliver information technology (IT) infrastructure and data center services for enterprises. We design complex IT systems in ways that can help large organizations consume less energy and water, reduce greenhouse gas emissions, and operate more efficiently.

## Sustainability in product design

Environmental considerations are integral to HP [research and development](#). We continually challenge ourselves to reduce the environmental impact of our products and meet increasing customer demand for more sustainable alternatives.

Through our company-wide [Design for Environment](#) (DfE) program, launched in 1992, more than 50 environmental product stewards work with design teams to identify and evaluate potential improvements in [energy efficiency](#), [materials](#) choices, and recyclability. The principles of DfE help set requirements and fuel innovations in all new HP-designed hardware products and printing supplies. Environmental product stewards help teams to improve product performance, measure progress, and communicate results to customers, HP management, and other stakeholders.

In November 2011, we launched [HP Project Moonshot](#)—a multiyear, multiphase program dedicated to designing extreme-low-energy server technologies. By incorporating more efficient chip designs that deliver increased computing power, we expect Project Moonshot to reduce energy use by up to 89% and costs by up to 63%.<sup>1</sup> These designs will also improve server efficiency, scalability, and utilization, while requiring up to 94% less rack space at a data center.<sup>1</sup> We plan to combine our Project Moonshot work with HP Converged Infrastructure innovations to enable customers to share storage, networking, and management resources across thousands of servers while reducing energy usage and cooling.

Through the [HP Pathfinder Program](#), part of Project Moonshot, we are assembling a network of industry leaders—including independent software vendors and computing, storage, and networking partners—to collaborate on developing and deploying extreme-low-energy server solutions. We expect HP Pathfinder to spur hardware and software innovations that support the evolution of cloud-based computing services, on-demand computing, and other technology environments that require massive data center infrastructures.

### Design for recyclability

We design HP products to help facilitate [recycling](#). For example, we use common fasteners and snap-in features and avoid applying glues, adhesives, or welds where feasible. This helps recyclers to more easily dismantle our products and to separate and identify different plastics. Most HP PCs are more than 90% recyclable, by weight.<sup>2</sup> In addition, HP workstations and the Elite and Pro series desktop PCs have a chassis that can be easily disassembled for upgrade to extend product life and for recycling at end of life.

As part of HP's efforts to enhance recycling, we are also working to improve the ability to remove inks from printed paper through [research in innovative inks, additives, paper design, and deinking processes](#).

## Design for accessibility

HP strives to create products, solutions, and online materials that are accessible to everyone, including people with disabilities and seniors with age-related limitations. Our product design teams regularly explore ways to enhance accessibility, productivity, and user comfort. Examples of accessibility features on HP products include buttons identifiable by touch, ports and switches positioned within easy reach, and large adjustable displays. Our customer support programs incorporate assistive technologies such as Telecommunications Relay Service, Video Relay Service, and Web Captioned Telephone to better serve users who are deaf or hard of hearing.

See the [HP Accessibility website](#) for more information and examples.

## Sustainability in IT and data center design services

Through our IT and data center design services, we offer expertise in creating facilities and operations that help customers conserve energy and other resources while reducing costs and improving business efficiency. We apply many of the same technical innovations and best practices from HP's own operations to our designs for customers.

[HP Critical Facilities Services](#) (CFS) provides strategic consulting, design-build, and operational assurance resources to help customers upgrade existing data centers or build highly efficient new facilities. For example, our Energy Efficiency Analysis compares customers' power usage effectiveness and other measures to industry best practices and recommends improvements. Further, HP CFS helps customers achieve key energy-efficiency certifications such as the U.S. Green Building Council (USGBC) LEED® Standard for Data Centers, U.S. Environmental Protection Agency (EPA) ENERGY STAR® for Data Centers, and U.S. Department of Energy (DOE) "Save Energy Now." As of April 2012, HP CFS had designed more than 60% of all LEED-certified data centers.

HP CFS has been integral to Citigroup's leadership in the design and construction of highly reliable data centers that are also more sustainable. The LEED-certified centers that Citi worked on with HP CFS, as well as other LEED-certified projects, keep Citi on track with its \$50 billion USD, 10-year program to reduce its environmental footprint. [Learn more.](#)

Details of the HP CFS life cycle approach can be found in the [Products and solutions section](#) life cycle graphic.

<sup>1</sup> Based on weighted average performance projections for workloads such as web serving, memcached, and data analytics. Cost estimates include infrastructure, space, and power and cooling costs over 3 years.

<sup>2</sup> Calculated using HP's Recyclability Assessment Tool.

# Materials

HP evaluates environmental impact across the product life cycle when selecting materials for use in our products. We design products to use less material, and we seek alternatives to materials of concern. We strive to use recycled materials when possible, and we comply with all relevant government regulations wherever we do business. Our objective is to minimize the environmental impact of HP products while continuing to deliver exceptional value to customers.

## Using less material

HP works to use materials more efficiently through innovations in technology and [product design](#). For example, [HP thin client computing devices](#) can require up to 50% less material to produce than a traditional HP desktop PC. We also provide software and services that help customers [optimize paper and supplies consumption](#).

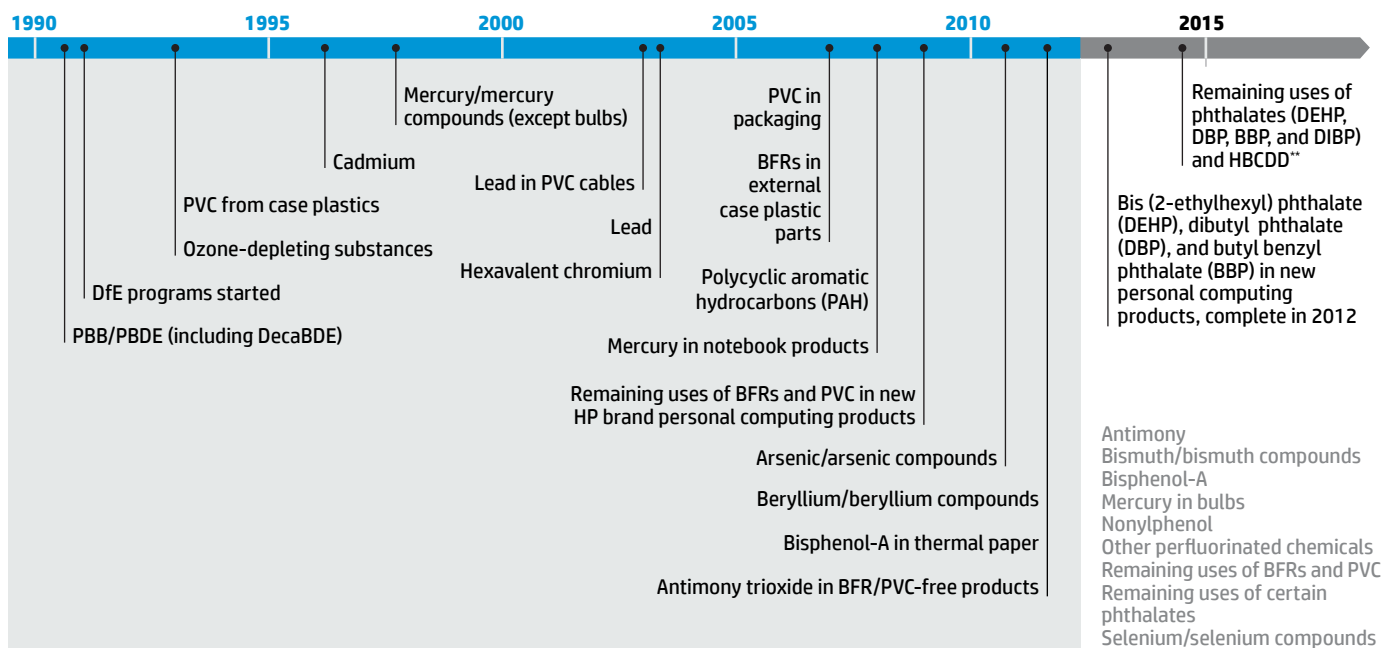
## Evaluating substances of concern

HP proactively evaluates materials of concern. We may restrict substances because of customer preferences, legal requirements, or because we believe it is appropriate based on a precautionary approach. When scientific analysis reveals a potential health or environmental concern, we seek to replace substances with commercially viable alternatives. HP carefully assesses the environmental, health, and/or safety risks of these alternatives.

### Nanotechnology

Nanotechnology holds long-term promise for creating electronics applications that require fewer materials and consume less energy. Since 1995, HP Labs has led research in the areas of nanoarchitecture, nanoelectronics, nanomechanics, and nanophotonics. Outcomes of this research include advances in [memristor-based computer memory](#), which has the potential to run 10 times faster and use 10 times less power than an equivalent flash memory chip.

### HP product proactive materials restriction/substitution timeline\*



\* Dates refer to when proactively adopted materials restrictions were first introduced on an HP product, ahead of regulatory requirements. Materials in gray text beyond April 2012 have been identified by stakeholders as potential materials of concern. Future possible restriction of those materials depends, in part, on the qualification of acceptable alternative materials. For a comprehensive list of HP's materials restrictions, including numerous materials restricted by HP on a worldwide basis in response to regional regulations, refer to [HP's General specification for the environment](#).

\*\* Limited to products within the scope of the EU RoHS Directive.

HP recognizes that since the properties of matter can depend on size and shape at the nanoscale, consideration of potential health and safety issues of nanostructured materials must be an integral part of any research program that seeks to bring such materials to market. Our [Intelligent Infrastructure Research group](#) at HP Labs has been a leader in research in this area.

## HP employees making an impact: Dr. Paul Mazurkiewicz

As a senior scientist, Dr. Paul Mazurkiewicz helps identify materials that have a reduced risk of health and environmental impact for use in HP products. [Learn more about Paul Mazurkiewicz on page 142.](#)

## HP compliance process

To help ensure HP meets legal requirements as well as our own materials standards, we follow a compliance process that has three key pillars:

- **The HP General Specification for the Environment (GSE)** includes substance and materials requirements for parts and components that are used in HP products, [packaging](#), and manufacturing processes.
- **The HP Supplier Safe and Legal Standard** provides a consistent management system standard for the design, manufacture, and delivery of products that meet regulations concerning electromagnetic compatibility, safety, telecommunication authorization, energy efficiency, and other product content specifications.
- **The HP Active Verification Material Testing Specification** defines our requirements for testing materials used in HP products for the presence of specific substances that are restricted under the GSE.

In 2011, we added restrictions to the HP GSE on the use of certain phthalates in plastic parts in HP products. We are considering additional future restrictions on phthalates.

## Phasing out BFRs and PVC

HP is working to phase out brominated flame retardants (BFRs) and polyvinyl chloride (PVC) where technically feasible in new products. For example, 96% of HP Compaq business PCs and HP notebooks launched in 2011 or after are BFR and PVC free.<sup>1</sup>

The timeline above shows substances that HP has proactively restricted or is considering for restriction.

## Examples of BFR- and PVC-free products\* in 2011

- The [HP Compaq 8200 Elite Ultra-Slim Desktop PC](#)
- The [HP EliteBook 2760p Notebook PC](#), which also features a mercury-free LED-backlit display and is made with at least 12% postconsumer recycled plastic
- The [HP ENVY<sup>110</sup> e-All-in-One](#), the world's only PVC-free printer as of August 2011\*\*

\* Meeting the evolving definition of "BFR/PVC-free" as set forth in the "INEMI Position Statement on the Definition of 'Low-Halogen' Electronics (BFR/CFR/PVC-Free)." Plastic parts contain < 1,000 ppm (0.1%) of bromine [if the Br source is from BFRs] and < 1,000 ppm (0.1%) of chlorine [if the Cl source is from CFRs or PVC or PVC copolymers]. All printed circuit board (PCB) and substrate laminates contain bromine/chlorine total < 1,500 ppm (0.15%) with a maximum chlorine of 900 ppm (0.09%) and maximum bromine being 900 ppm (0.09%). Service parts after purchase may not be BFR/PVC free. Power supply and power cords are not BFR/PVC free.

\*\* The HP ENVY<sup>110</sup> e-All-in-One is polyvinyl chloride-free (PVC-free), meeting the evolving definition of "PVC-free" as set forth in the "INEMI Position Statement on the Definition of 'Low-Halogen' Electronics (BFR/CFR/PVC-Free)." Plastic parts contain < 1,000 ppm (0.1%) of chlorine [if the Cl source is from CFRs or PVC or PVC copolymers]. Printers sold in China, India, and Korea have power cords that are not PVC-free. USB cable, required in limited geographic areas, is not PVC-free.

## Assessing alternative materials

When replacing substances of concern, we seek to identify alternatives with a reduced risk of potential human health and environmental impacts that also meet our performance and cost criteria.

To support these objectives, we have developed an integrated assessment approach to analyzing potential replacements for substances of concern. Established in 2007, our approach begins with a hazard-based screening step to help rule out alternative options that are of equal or greater concern than the substances that they would replace. This comparative chemical hazard screening is based on the [GreenScreen™ for Safer Chemicals](#) framework developed by the nongovernmental organization (NGO) Clean Production Action.

Integrating the GreenScreen framework into our overall alternatives assessment protocol has enabled HP to more easily select replacement materials with a reduced risk of human health and environmental impacts. We have completed more than 130 assessments since the program began. Projects in 2011 included evaluating PVC-free power cords, process cleaners, and general plastic resins. We also participated in the Green Chemistry and Commerce Council (GC3) plasticizer alternatives assessment project, which employs GreenScreen.

<sup>1</sup> Meeting the evolving definition of "BFR/PVC-free" as set forth in the "INEMI Position Statement on the Definition of 'Low-Halogen' Electronics (BFR/CFR/PVC-Free)." Plastic parts contain < 1,000 ppm (0.1%) of bromine [if the Br source is from BFRs] and < 1,000 ppm (0.1%) of chlorine [if the Cl source is from CFRs or PVC or PVC copolymers]. All printed circuit board (PCB) and substrate laminates contain bromine/chlorine total < 1,500 ppm (0.15%) with a maximum chlorine of 900 ppm (0.09%) and maximum bromine being 900 ppm (0.09%). Service parts after purchase may not be BFR/PVC free. Power supply and power cords are not BFR/PVC free.



Building on HP's success with this approach, we joined with the Business-NGO Working Group for Safer Chemicals and Sustainable Materials in 2011 to help draft a version of the [chemical alternatives assessment protocol](#) for use by other industries and groups to improve their materials selection processes.

## Using recycled materials

HP continues to expand the use of [recycled materials](#) in its products. For example:

- The [HP EliteBook 2560p](#), launched in 2011, is our first notebook computer made with more than 20% postconsumer recycled plastic.
- The HP Deskjet 3070A e-All-in-One printer contains 25% recycled plastic, and the [HP Deskjet 3050A e-All-in-One](#) contains 25% post-consumer recycled plastic. As of July 2011, no other manufacturer had claimed to produce a printer made with more recycled content.<sup>2</sup>

Through our [“closed loop” recycling process](#), Original HP ink and LaserJet toner cartridges are reduced to raw materials that can then be used to make new cartridges as well as other metal and plastic products. We are also developing “closed loop” recycling processes for some of our hardware products. This effort involves recovering plastic from electronics products at HP's North American recycling facilities, and recompounding the plastic to return it to virgin resin properties and colors for use in creating new electronics products.

## Supporting relevant government regulations

HP complies fully with materials regulations, and we were among the first companies to extend the restrictions in the European Union (EU) Restriction of Hazardous Substances (RoHS) Directive to our products worldwide through the HP GSE. HP has contributed to the development of related legislation in Europe, as well as China, India, and Vietnam.

We believe the RoHS directive and similar laws play an important role in promoting industry-wide elimination of substances of concern. We have supported the inclusion of additional substances—including PVC, BFRs, and certain phthalates—in future RoHS legislation that pertains to electrical and electronics products. (See our [compliance statement](#).)

HP complies with the EU's Registration, Evaluation, Authorisation, and Restriction of Chemical substances ([REACH](#)) legislation, which includes requirements for assessing and managing the risks posed by chemicals. We accomplish this by working closely with suppliers to gather information on listed substances that may be in HP product materials and providing related safety information to customers.

Our approach to regulatory compliance also covers material sourcing. HP is working with a range of stakeholders to help ensure that [conflict minerals](#)—minerals originating from the Democratic Republic of Congo (DRC) and adjoining countries that are used to produce tin, tantalum, tungsten, and gold—do not directly or indirectly fund groups responsible for human-rights abuses.

# Manufacturing

Product manufacturing, managed primarily by HP suppliers, represents a sizable amount of our overall greenhouse gas (GHG) emissions footprint. HP collaborates with our manufacturing partners and suppliers to reduce this environmental impact.

As part of our [Supply Chain Social and Environmental Responsibility \(SER\) program](#), HP focuses on a broad range of environmental performance factors across our business. We capture data on

energy use, [GHG emissions](#), and water use to assess our suppliers' carbon footprint, communicate the findings, and engage suppliers to improve their performance.

In 2008, HP became the first major information technology (IT) company to publish aggregated supply chain GHG emissions, beginning with data from 2007. We have continued working with suppliers and industry organizations to improve energy management within our supplier base.

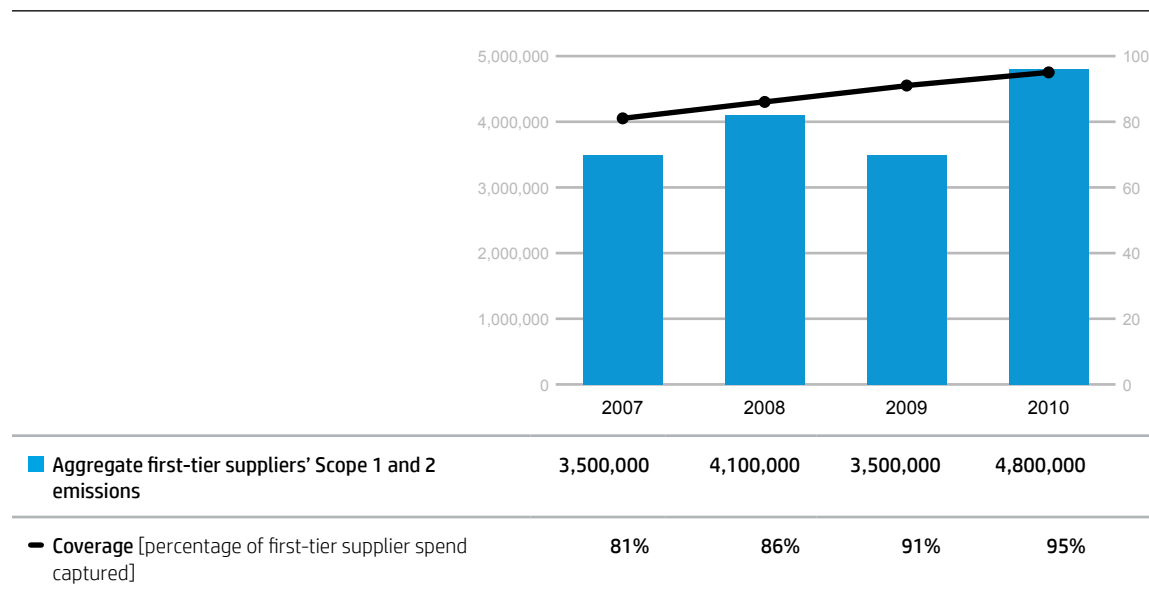
<sup>2</sup> HP IPG Research Alliance, July 2011. Based on a survey of publicly available information.

## Supplier GHG emissions data

To provide context for the data we report on first-tier supplier GHG emissions, we also report the percentage of our overall spending on first-tier suppliers that the data represents. Each year since 2007, that percentage has increased. The proportion of that spend with

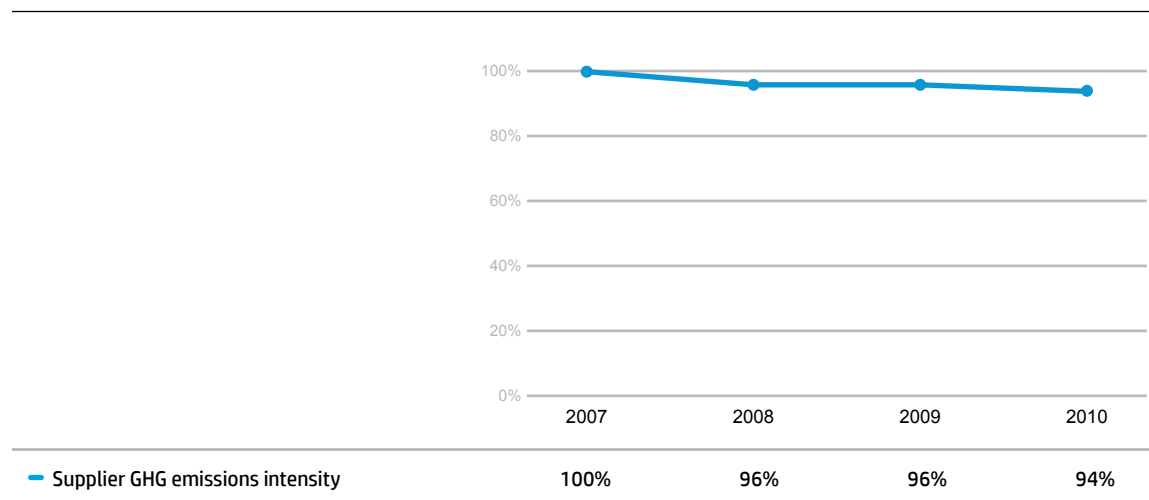
suppliers that have reduction goals has also continued to rise, from 67% in 2008 to 88% in 2010 (the most recent year data is available). Additionally, the percentage of that spend represented by suppliers that estimate their own Scope 3 GHG emissions<sup>1</sup> have increased from 29% in 2008 to 54% in 2010. During that same time period, the data we captured has shown a steady decrease in GHG emissions intensity (see graph below).

### Supplier GHG emissions performance\* [tonnes CO<sub>2</sub>e]



\* Refers to first-tier suppliers for manufacturing, materials, and components. Emissions are estimated based on suppliers' dollar volume of HP business compared with their total revenue. The majority of these companies report on a calendar year basis. 2010 is the most recent year data is available.

### Supplier GHG emissions intensity [tonnes CO<sub>2</sub>e/first-tier supplier spend, 2007 = 100%]



<sup>1</sup> The World Resources Institute (WRI) defines Scope 1, 2, and 3 GHG emissions in its Greenhouse Gas Protocol; see [www.ghgprotocol.org/calculation-tools/faq](http://www.ghgprotocol.org/calculation-tools/faq).

The growth in aggregate first-tier emissions in 2010 may be attributable to several factors, including strong business growth and a 4% increase in data collection scope. As more companies disclose emissions numbers, and require their partners to do the same, the data is becoming more comprehensive, inclusive, and accurate. HP remains at the forefront of encouraging transparency in data collection, leading to greater insight into emissions across the IT industry.

## Environmental hot spot analysis

We enlisted the services of [HP Energy and Sustainability Management \(ESM\)](#) to conduct an assessment that would complement data received from suppliers. Leveraging analytic modeling tools from HP Labs, ESM developed a supply chain “hot spot” analysis and service that rapidly analyzes energy and natural resource use in any company’s supply chain.

The analysis examined HP’s supply chain, from raw materials extraction to product manufacturing, considering specific environmental aspects including electricity and natural gas use, water consumption, waste generation, and GHG emissions. The results of this analysis will help shape HP’s future capability building programs, and may be used to identify specific areas of focus in our supply chain to improve efficiency and performance.

## Expanding the Energy Efficiency Partnership program in China

In 2010, HP became a charter member of the BSR Energy Efficiency Partnership (EEP) program in China. The working group helps suppliers reduce energy use and associated GHG emissions, and lower costs. Throughout 2011, all 12 participating supplier sites developed and submitted action plans for energy management, including a total of 24 new energy-saving projects (see sidebar at right).

The programs target improved energy efficiency across operations: heating, ventilation, and air conditioning (HVAC); boilers and steam heating; lighting; heat recovery ventilation (for fresh air and climate control); compressed air; and electrical motor and drive systems used to operate machinery. During the first 10 months of the 2011 program cycle (through June 2011), participating HP suppliers reported that they saved a total of 6 million kilowatt hours (kWh), equal to the carbon dioxide equivalent (CO<sub>2</sub>e) emissions of removing 811 passenger vehicles from the road for a year.<sup>2</sup>

In 2012, HP is expanding its role in the initiative by partnering with the World Wildlife Fund (WWF), extending the reach of the initiative to additional companies. Program participation will total 34 suppliers and 50 sites across China, up from eight suppliers and 12 sites in 2011.

### A partner in efficiency

[Jabil](#), a worldwide electronics solution provider, joined the EEP program in 2010. The company provides design, production, and product management services to electronics and technology companies.

One component of their EEP participation was a 2011 comprehensive energy audit by an external firm at Jabil’s manufacturing site in Huangpu. As a result, the company instituted a number of energy-management practices. One involved a smart metering system to track and measure energy consumption throughout the facility. While the initial phase is focused on electricity use, future monitoring will include water, steam, natural gas, and other resources used in Jabil’s manufacturing, heating, lighting, and operations.

During the first 6 months, Jabil saved almost 2.7 million kWh at the site, helping to reduce GHG emissions and deliver substantial cost savings. Due to these energy savings, the system is expected to pay for itself within 2 years.

<sup>2</sup> U.S. EPA Greenhouse Gas Equivalencies Calculator. For details, see [www.epa.gov/cleanenergy/energy-resources/calculator.html](http://www.epa.gov/cleanenergy/energy-resources/calculator.html).

# Packaging

Packaging can contribute significantly to the environmental footprint of HP products. It also provides an opportunity for us to demonstrate to customers our commitment to conserving resources. While we aim to reduce environmental impacts associated with the materials, transport, and recycling or disposal of packaging, we must balance those efforts with other considerations such as adequate product protection, regulatory requirements, total costs, and the overall impact of alternative packaging options. HP pursues a holistic approach to packaging that considers all phases of the process—from raw materials acquisition to end of life—to guide our decisions.

We integrate these considerations into our guidelines for third-party packaging vendors, enabling them to create more innovative and environmentally responsible packaging designs. Also, our [General Specification for the Environment \(GSE\)](#) restricts substances of concern and requires that all materials used in HP packaging be recyclable.

Our environmental strategy for packaging consists of the following six dimensions. (Examples of our work across each of these dimensions can be found in the table below.)

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## Remove

We strive to eliminate the use of substances of concern when lower-impact alternatives are readily available. For example, our GSE bans the use of PVC as a packaging material with minor exceptions.<sup>1</sup> (See related information regarding our products in [Materials on page 36](#).)

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## Reduce

To be effective, packaging designs must take into account a product's size, weight, and durability. In turn, the size and weight of packaging materials affect the carbon footprint of [product transport](#). With these considerations in mind, we continue to reduce the amount of packaging used per product while maintaining adequate protection. We meet or exceed local legal standards for packaging minimization where they exist; where local standards do not exist, we stipulate that packaging cannot be more than twice the volume of the product it contains. We have also continued to reduce the

amount of paper delivered with products, such as warranties and manuals, by making the information available online for our customers rather than including it in the packaging. (See [Paper on page 27](#) for more information.)

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## Reuse

We design packaging to enable reuse where feasible, while providing sufficient protection for our products. This includes making it easier for our retailers, distributors, and enterprise customers to return packaging materials to HP or reuse the materials for future shipments. For example, we incorporate reusable packaging when shipping certain components from suppliers to factories, and when sending certain replacement parts to customers.

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## Recycle

We are committed to increasing the proportion of recycled content in HP packaging materials. The amount of recycled content varies widely by region, packaging material, and product type. Where feasible, HP is shifting from plastic packaging to paper and molded pulp alternatives that contain recycled content and/or have been certified in accordance with a sustainable forest management standard. In some instances, however, plastic packaging may actually decrease carbon footprint because it is significantly smaller and lighter than the molded pulp packaging that would be needed to provide a similar level of protection. In those cases, we increasingly use expanded polystyrene (EPS) or polyethylene (PE) foam cushions that contain recycled plastic.

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## Replace

Whenever possible, we use packaging materials that reduce environmental impact while still meeting our product protection requirements. We evaluate the total life cycle of materials to assess the overall impact of a change; for example, weighing factors such as recyclability and the potential to reduce greenhouse gas (GHG) emissions.

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<sup>1</sup> The restriction on PVC in HP packaging does not apply to protective tape covers with a surface area equal to or less than 15 square centimeters (2.35 square inches) and/or weighing less than 1g (0.035 ounce).

## Influence




As a major purchaser of packaging materials, HP uses its influence to encourage packaging vendors to increase the use of recycled fiber content and sustainably harvested fiber in our paper-based packaging. We are also working with providers of 100% recycled EPS and PE foam cushions to broaden industry adoption of these materials and build the infrastructure required to make them easier to recycle. Our support helped Sealed Air, a major supplier of recycled PE foam used in cushions for HP packaging, to expand its “closed loop” recycling process globally and create Ethafoam® MRC, which is made with 100% recycled resin content (see quote at right).

“HP has enhanced its sustainability efforts by working with its packaging suppliers, production factories, and end users to send back their PE foam material scrap through our ‘closed loop’ recycling system instead of to a landfill. Together, we are improving the design of PE foam packaging for HP to facilitate the safe arrival of its products, while also further reducing environmental impact.”

—Ron Cotterman, Sustainability Director, Sealed Air

### HP packaging: environmental highlights

HP packaging innovations often touch on multiple dimensions of our environmental strategy, as shown in the following examples.

<b>Remove</b>	<b>HP notebook PCs</b> Eliminated a cardboard insert from packaging to use fewer materials.		
<b>Reduce</b>	<b>HP notebook PCs</b> Reduced packaging material weight by an average of 180 grams per unit—reducing GHG emissions from product transport by an estimated 15,000 tonnes of carbon dioxide equivalent (CO <sub>2</sub> e) annually.	<b>HP Officejet Pro 8600 e-All-in-One printer</b> Influenced product design to enable smaller and lighter packaging, reducing GHG emissions from product transport by an estimated 2,100 tonnes of CO <sub>2</sub> e annually.	
<b>Reuse</b>	<b>Bulk shipping of products</b> Return corrugated fiberboard trays to manufacturers after they have been used for bulk shipping of products to retailers.	<b>HP BladeSystem blade server bulk packs</b> Supply chain partners reuse packaging materials when shipping server components from one factory to the next.	
<b>Recycle</b>	<b>HP high-capacity XL ink cartridge combo packs</b> Use paperboard containing 15% recycled content for the external shell.	<b>HP commercial desktop PCs</b> Units shipped in North America are packaged with foam cushions made from 100% recycled plastic content.	
<b>Replace</b>	<b>HP high-capacity XL ink cartridge combo packs</b> Replaced thermoformed plastic with paperboard in external packaging.		<b>HP commercial desktop PCs</b> Replaced molded pulp with recycled PE foam cushions that are smaller and lighter.
<b>Influence</b>	<b>Desktop PCs</b> Working with providers of recycled foam cushions to broaden industry adoption and build recycling infrastructure.		



# Transport

HP conducts business in more than 170 countries globally, and ships more than a million products around the world on a typical day. We are committed to reducing the greenhouse gas (GHG) emissions and other environmental impacts related to these activities.

In 2011, GHG emissions related to transporting our products equaled an estimated 1.9 million tonnes of carbon dioxide equivalent (CO<sub>2</sub>e), approximately the same as in 2010. This is roughly comparable to GHG emissions from our own [operations](#).

Our strategy for decreasing fuel use and transport-related emissions concentrates on three areas.

## Optimizing product transport networks

HP is decreasing the distance products need to travel, and therefore reducing fuel use and GHG emissions. We accomplish this by locating manufacturing facilities closer to customers, using distribution centers that allow us to operate the most direct routes, and consolidating shipments when feasible.

In 2011, HP began manufacturing some desktop PCs and monitors bound for the Middle East, Mediterranean, and Africa in the northwestern Turkish city of Corlu, instead of in the Czech Republic. This shift converted shipments from air to ocean, reducing costs and decreasing fuel-related GHG emissions that year by more than 30%.<sup>1</sup>

We also recognize the environmental benefits of warehouse consolidation. In the United States, HP consolidated three West Coast warehouses into one—reducing the total square footage, improving operational and energy efficiencies, and increasing the consolidation of outbound freight. With all inbound freight now shipped to a single port and consolidated for distribution, we were able to decrease average transport distance per shipment by approximately 200 road miles.

To further reduce overall environmental impacts, HP takes a holistic approach to the relationship between product packaging and transport. Learn more in [Packaging on page 41](#).

## Shifting modes of transport

We typically ship HP products by ocean or air from the manufacturing location to regional distribution centers, and then by truck or rail to their final destinations. Because emissions vary greatly by transport mode, shifting modes can reduce impacts substantially (see chart below).<sup>2</sup> In 2011, HP air-to-ocean conversions included selected shipments of HP notebook PCs from Asia Pacific to Europe, Latin America, and the United States, resulting in an estimated savings of 15,000 tonnes of CO<sub>2</sub>e.

Estimated GHG emissions from product transport, 2011\*

Mode	2010			2011		
	GHG emissions [million metric tonnes CO <sub>2</sub> e]	GHG emissions [percentage of total from transport for year]	Shipment mix by weight-distance [approximate, kg-km]**	GHG emissions [million metric tonnes CO <sub>2</sub> e]	GHG emissions [percentage of total from transport for year]	Shipment mix by weight-distance [approximate, kg-km]**
Air	1.2	65%	10%	1.3	70%	10%
Ocean	0.2	10%	70%	0.2	10%	70%
Road (includes rail)	0.5	25%	20%	0.4	20%	20%

\* Table does not include data from all recent HP acquisitions.  
 \*\* All figures rounded; improvements in mode transport efficiency may not be fully reflected.

<sup>1</sup> Calculation based on GHG Protocol weight/distance method.  
<sup>2</sup> According to the World Resources Institute GHG Protocol. Calculation methodology based on [GHG Protocol distance-based method](#).

## Influencing logistics service providers

HP works with logistics service providers (LSPs) who maintain high standards for reducing their environmental footprint and that of their customers. We require our LSPs to track GHG emissions associated with the transport of HP products.

In the United States and Canada, all HP consumer products are shipped using a network composed entirely of surface transportation carriers certified by [SmartWay](#)—a collaboration between the U.S. Environmental Protection Agency (EPA) and the freight transportation industry. Now considered a baseline requirement in shipping and logistics, SmartWay aims to reduce fuel consumption and GHG and other air emissions.

# Use

Addressing impacts during customer use of our products and solutions is an integral part of HP's [life cycle approach](#) to environmental sustainability.

For example, HP works to improve energy efficiency across our entire portfolio, from the smallest devices to the largest data centers. In 2011, we exceeded our goal of reducing the energy consumption of HP products<sup>1</sup> and associated greenhouse gas (GHG) emissions to 40% below 2005 levels by the end of 2011, achieving a 50% reduction 9 months ahead of schedule.

HP recognizes the importance of addressing energy and paper consumption during product use. For many of our products, the use phase represents the largest portion of their respective carbon footprints.

At the same time, relative impacts vary across a hardware portfolio as diverse as HP's, which ranges from single user personal computing devices and printers to enterprise-wide servers, storage equipment, and complete data centers. Conscious of the complexity that portfolio usage and global power mix entail, HP is undertaking an effort to measure the carbon footprint during use of sold products according to the Greenhouse Gas Protocol (GHG Protocol) Corporate Value Chain (Scope 3) Accounting and Reporting Standard.<sup>2</sup>

To reduce resource and energy consumption during product use, HP continually strives to improve product performance and provide customers with the knowledge and tools that help to inform their purchase decisions and usage.

## HP Energy and Sustainability Management (ESM)

In early 2012, ESM began working with a major northeastern American city to assess its energy consumption and develop a strategic approach to reducing energy costs. ESM advised the city on technology and software solutions best suited to reduce its energy use, decrease GHG emissions, and meet goals established by city government. The project included a rapid assessment of the city's ongoing energy use to identify opportunities to reduce a growing energy budget.

Using the web-based [HP Carbon Footprint Calculator](#) for computing and printing products, customers can compare estimated paper and energy use and costs, along with carbon emissions for HP and Compaq products, side by side, based on location-specific data.<sup>3</sup> In 2011, we expanded the calculator to cover more than 9,000 HP and non-HP devices.<sup>4</sup> The calculator receives more than 10,000 visits per month.

## Personal computers and devices

At the end of 2011, HP had more than 400 PC and display products with configurations that are ENERGY STAR® qualified with 85% efficient power supplies. One example is the HP TouchSmart610 PC series. If just 10% of all desktop PCs and monitors sold in 2005 were recycled and replaced with the energy-efficient [HP TouchSmart](#) PCs,

<sup>1</sup> The average energy consumption of HP products is estimated using high-volume product lines representative of the overall shipped product volume. Energy consumption has been estimated in 2005 and annually since. The high-volume product lines include notebook and desktop computers, inkjet and LaserJet printers, and industry-standard servers.

<sup>2</sup> The GHG Protocol, a decade-long partnership between the World Resources Institute (WRI) and the World Business Council for Sustainable Development (WBCSD), is the most widely used international accounting tool for government and business leaders to understand, quantify, and manage greenhouse gas emissions. More information at [www.ghgprotocol.org](http://www.ghgprotocol.org).

<sup>3</sup> Power, cost, and carbon calculations are estimates. Results will vary based on variables, which include information provided by the user, time PC is in different power states (on, standby, off), time PC is on AC, hardware configuration, variable electricity rates, and utilities provider. HP advises customers to use information reported by this Carbon Footprint Calculator for reference only and to validate impact in their environment. For more information about calculation assumptions, see [www.hp.com/large/psg/toolassumptions.pdf](http://www.hp.com/large/psg/toolassumptions.pdf).

<sup>4</sup> The Carbon Footprint Calculator also estimates the user's costs for the electricity and paper a printer consumes. It is based on certain key assumptions and makes use of data and models generated by third parties.

more than 3.1 million tonnes of carbon dioxide equivalent (CO<sub>2</sub>e) emissions would be avoided during the first year, equivalent to removing 596,000 cars from the road for a year.<sup>5</sup>

As of January 2012, HP has 89 EPEAT® Gold registered personal computing products, meeting the highest global standards for “greener” electronics as measured by the [Electronic Product Environmental Assessment Tool](#). And as of the end of 2011, the entire family of HP ENVY Notebook PCs is EPEAT Gold registered as well.

The [HP Compaq 8200 Elite](#) ultraslim desktop PC delivers 40% faster performance and up to 50% greater energy efficiency than the previous-generation product.<sup>6</sup>

Helping end users more easily manage their energy use, [HP Power Assistant](#) offers real-time visibility and control of a PC's energy use, and helps customers meet their goals for more energy-efficient computing. The Usage Details feature estimates the costs of running a PC—in dollars, kilowatt hours, and CO<sub>2</sub>e emissions.<sup>7</sup>

## Imaging and printing

As of December 2011, we offered the greatest number of ENERGY STAR qualified printers and multifunction printers (MFPs) in the industry. Further, HP increased the overall energy efficiency of our ink and laser printing products by 46% from 2005 to 2011.<sup>8</sup>

HP continues to pioneer ways to help customers reduce the carbon footprint of their printing. Worldwide in 2012, HP LaserJet and inkjet printers will use 13% less electricity per year than 2011 HP LaserJet and inkjet printers.<sup>9</sup> That's equivalent to 71,000 tonnes of GHG emissions—or like taking 14,000 passenger cars off the road for a year.<sup>10</sup>

The [HP LaserJet Pro P1102](#) is the world's most energy-efficient laser printer.<sup>11</sup> It also features [HP Auto-On/Auto-Off Technology](#), which turns your printer on when you need it and off when you don't.<sup>12</sup> By the end of 2012, most new HP LaserJet printers and multifunction printers will include Auto-On/Auto-Off energy-saving features.

[HP Managed Print Services](#) (MPS) helps cut costs and conserve resources. Pre- and post-analysis of HP MPS customers' imaging and printing operations reveals energy savings of up to 80%, and reductions in paper consumption in the millions of pages.<sup>13</sup> Disney seeks the best solutions to help deliver on its environmental promise and worked with HP to develop its Document Output Management Program using HP MPS. Disney reduced the number of printing devices by 59%. As a result, Disney reported that its energy consumption for printing dropped by 18% and avoided an estimated 185 tonnes of CO<sub>2</sub>e emissions over 3 years. To learn more, read the [Disney case study](#).

[HP Web Jetadmin](#) provides organizations a comprehensive view of activity across their printing fleet and lets IT managers centrally configure and manage devices across the enterprise to take advantage of energy-saving features such as automatic sleep and wake modes. And with the [HP EcoSMART Fleet](#)—introduced in 2011—users can collect data and control settings, then create reports to establish and monitor progress toward environmental goals.

HP Retail Publishing Solutions offers HP MiniLab and HP MicroLab inkjet solutions, self-contained systems that provide a less resource-intensive alternative to traditional photo processing by eliminating the need for water. If all silver halide systems worldwide were switched to HP Minilab printers, the estimated reduction in carbon dioxide (CO<sub>2</sub>) emissions would be equivalent to removing 65,000 passenger vehicles from the road for a year.<sup>14</sup> And HP Retail Publishing Solutions is nearly three times more energy efficient than traditional silver halide minilabs—amounting to an estimated cost savings of up to \$1,000 USD per machine per year.<sup>15</sup>

<sup>5</sup> HP compared the energy consumption of comparable HP products in 2005 with our latest models for each category of products, including the HP TouchSmart 610 series PCs. Estimations of the energy consumption of 2005 products were done by using worldwide IDC shipped volumes, HP products, U.S. Environmental Protection Agency's [ENERGY STAR](#) program product averages, and the typical energy consumption (TEC) method. The energy costs are based on [U.S. Department of Energy data](#), and actual results may vary. We used the following products for this analysis: HP Deskjet 3050, HP LaserJet CP1215, HP LaserJet CP1025, HP Compaq 8200 Elite, HP Compaq 2310, HP Compaq 8000f Elite, HP Compaq LE19 monitor, HP StorageWorks EVA, HP ProBook 6550b, HP G60t Series Notebook, HP TouchSmart610 PC, HP ProLiant DL380 G4 and G6 servers, and the HP ProLiant DL360 G7 server.

<sup>6</sup> PCMark05 performance benchmark and comparison testing performed on a similarly configured HP Compaq 8000 Elite SFF and HP Compaq 8200 Elite SFF. Performance profiles: PCMark05 done with the “as shipped” defaults. Power benchmark and comparison testing performed on a similarly configured HP Compaq dc7900 SFF and HP Compaq 8200 Elite SFF. Power profiles: power measurements were done with the “as shipped” defaults. Power measurements for idle, off, and sleep/standby were conducted per ENERGY STAR guidelines. Actual results may vary based on system configuration, and performance will vary over time depending on software installed.

<sup>7</sup> HP Power Assistant enhances management of the system energy requirements and enables users to take control of their power consumption for a reduced impact on the environment. Power calculations and cost calculations are estimates. Results will vary based on variables, which include information provided by the user, time PC is in different power states (on, standby, hibernate, off), time PC is on battery or AC, hardware configuration, variable electricity rates, and utilities provider. HP advises customers to use information reported by HP Power Assistant for reference only and to validate impact in their environment. Environmental calculations were based on U.S. Environmental Protection Agency (EPA) eGrid 2007 data found at [www.epa.gov/egrid](http://www.epa.gov/egrid). Regional results will vary. Microsoft® Windows® required.

<sup>8</sup> Efficiency is defined in terms of kilowatt hours (using the typical electricity consumption method) divided by pages per minute. These families represent more than 32% of inkjet printers and more than 45% of LaserJet printers shipped in 2005. HP updated this goal from the goal included in the FY07 Global Citizenship Report, which targeted a 30% improvement in energy efficiency by 2010, relative to 2005.

<sup>9</sup> Baseline figure is 2011 HP LaserJet and inkjet printers sold worldwide.

<sup>10</sup> U.S. EPA Greenhouse Gas Equivalencies Calculator. For details, see [www.epa.gov/cleanenergy/energy-resources/calculator.html](http://www.epa.gov/cleanenergy/energy-resources/calculator.html).

<sup>11</sup> Energy consumed based on competitive TEC measurement results found at [www.energystar.gov](http://www.energystar.gov), and manufacturers' published data sheets for single-function mono and color laser printers as of January 2012. Individual product configuration and usage will affect power consumption.

<sup>12</sup> HP Auto-On and Auto-Off capabilities subject to printer and settings.

<sup>13</sup> Estimated energy and paper savings based on analysis of select HP Managed Print Services customers' imaging and printing operations using data gathered on devices and paper consumption, and comparing with post-MPS actuals or projections.

<sup>14</sup> Claim based on PPN data on worldwide total installed base of approximately 106,416 silver halide minilabs (September 2009). Calculated with the EPA Greenhouse Gas Equivalencies Calculator. For details, see [www.epa.gov/cleanenergy/energy-resources/calculator.html](http://www.epa.gov/cleanenergy/energy-resources/calculator.html). Based on a 2010 life cycle assessment (LCA) performed by Four Elements Consulting and commissioned by HP. The study compared the impact of using HP ML1000D, HP ML2000D and HP MicroLab pm2000e printers with the impact of using Fuji Frontier 370 and Noritsu QSS-3502 printers to produce 450,000 4 x 6-inch photos a year in North America. For details, see [www.hp.com/go/rps](http://www.hp.com/go/rps).

<sup>15</sup> [h20338.www2.hp.com/enterprise/downloads/HP%20Retail%20Publishing%20Solutions%20-%20Saving%20Energy.pdf](http://h20338.www2.hp.com/enterprise/downloads/HP%20Retail%20Publishing%20Solutions%20-%20Saving%20Energy.pdf).

## Data center services and solutions

HP takes a holistic approach to the data center. Our services include comprehensive networking, storage, and server assessment; energy-efficiency evaluation; and data center design and management. We're improving the energy efficiency of our servers as well. The latest [HP ProLiant G7 and Gen8 servers](#) are ENERGY STAR qualified, helping customers reduce energy consumption, reclaim capacity, and extend the life of the data center.

In 2011, with the help of HP Converged Infrastructure, global logistics provider UPS replaced a disparate, disconnected collection of traditional servers that were difficult and costly to manage with an HP Converged Infrastructure solution that moves the company's mission-critical systems to a virtualized environment with industry-standard HP ProLiant servers and HP storage arrays, supported by HP networking solutions. Virtualization has reduced server count by more than 1,000 physical servers over 2 years, and reduced energy use by 4.8 million kilowatt hours (kWh). To learn more, read the full [case study](#).

[HP Critical Facilities Services](#) (CFS) provides consulting and design engineering and architecture services, working with clients to evaluate their needs and help with the planning and implementation of all aspects of data center infrastructure. One solution is the HP Flexible Data Center, which uses prefabricated, standardized components to shorten the time it takes to build and deploy a data center. In addition to lower capital costs and faster time to market, HP Flexible Data Center configurations improve the use of power and cooling resources to reduce energy and water consumption, and decrease GHG emissions. The Flexible Data Center can cut energy costs by nearly 14% and reduce annualized power usage effectiveness (PUE) rating by 13.2%, compared with a traditional data center.<sup>16</sup>

## Software

HP software products can help customers save energy, costs, and other resources by reducing unnecessary computing and storage capacity.

With [HP Software as a Service \(SaaS\)](#), HP hosts and operates software for our customers, sharing the systems on which the software runs among multiple users and multiple applications. Because customers are not running software through their data centers, they save power, cooling, energy, and floor space.

SaaS is a component of cloud computing which provides on-demand access to configurable shared resources, including software. The predicted adoption of cloud computing by U.S. businesses with annual revenues of more than \$1 billion USD could save an

## HP POD 240a Data Center



In 2011 we announced the HP POD 240a—also known as the [HP EcoPOD](#)—a self-contained, modular, ultraefficient data center. The HP EcoPOD achieves ten times the information technology (IT) capacity per square foot, compared with conventional brick-and-mortar data centers. It can be quickly deployed at one-quarter of the cost of a traditional data center and uses 95% less facilities energy.\*

\* New POD technology from HP offers 95% greater energy efficiency compared with a traditional brick-and-mortar data center, based on internal HP testing.

estimated 85.7 million tonnes of CO<sub>2</sub> emissions by 2020, as a result of spending 69% of infrastructure, platform, and software budgets on cloud services.<sup>17</sup>

HP SaaS can reduce environmental impacts related to software disk and packaging manufacture, distribution, and shipping, also resulting in greater operational efficiency and better resource management. And by offering remote access to software via the Internet, SaaS expands opportunities for telecommuting and remote IT support, which can reduce the need for travel.

[HP Business Service Automation \(BSA\)](#) is software that customers use to manage IT services and capacity to improve efficiency across domains and virtual environments. For example, BSA can be used in conjunction with data center hardware to dynamically adjust capacity, switching off equipment when it is not needed. Companies that have used BSA for storage provisioning report that they have regained up to 40% of space from existing storage.<sup>18</sup>

[HP Service Health Optimizer](#) is capacity-planning software that makes recommendations on how to reduce the number of systems in an IT environment. It proposes configurations for the ideal size, placement, and allocation of virtual machines relative to physical space. This increased density can decrease the system footprint space and energy consumption.

<sup>16</sup> [h20195.www2.hp.com/V2/GetPDF.aspx/4AA2-1533ENW.pdf](http://h20195.www2.hp.com/V2/GetPDF.aspx/4AA2-1533ENW.pdf).

<sup>17</sup> 2011 Carbon Disclosure Project Study.

<sup>18</sup> Dimensional Research "HP Customers Reveal Real-Life Benefits of IT Automation" 2010.



# 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.<sup>1</sup>

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)

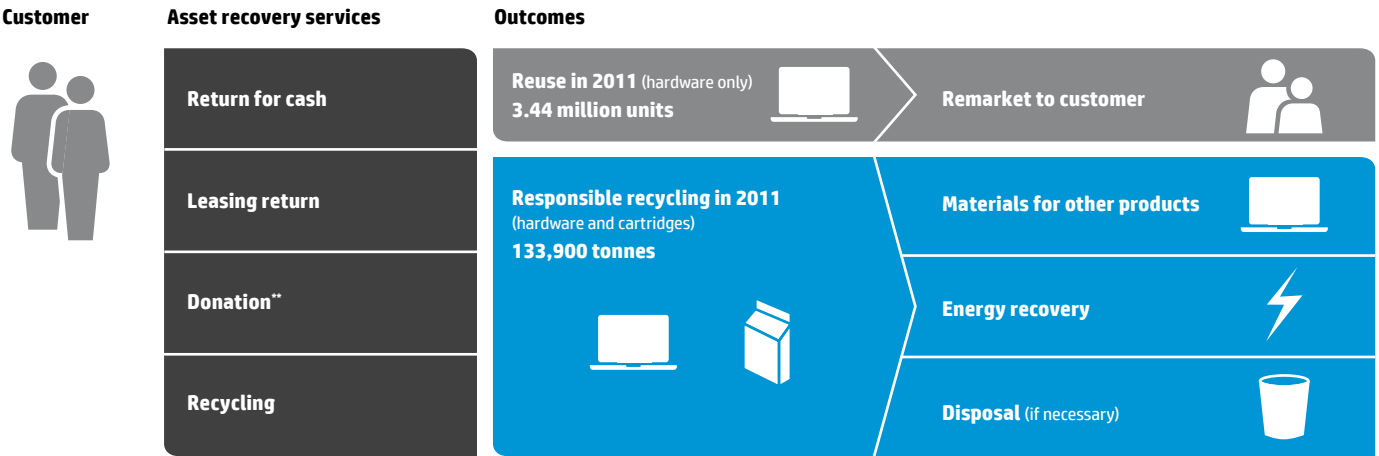
# 133,900 tonnes

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

<sup>1</sup> Calculation based on weight as reported at [www.nps.gov/stli/historyculture/statue-statistics.htm](http://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><b>Hardware reuse*</b> (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 <a href="#">Hardware reuse standards</a> 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

### Hardware recycling

We recycle returned products that are not suitable for reuse.

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.

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.

We make appropriate recycling arrangements with commercial customers on a case-by-case basis.

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.

Available in 50 countries and territories.

In 2011, we launched a new hardware recycling facility in Kenya (see below).

ERP recycled 40,000 tonnes of electronic equipment on behalf of HP in 2011.

### HP ink and toner cartridge recycling

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](#).

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.

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.)

We provide free recycling for HP cartridges in 55 countries and territories.

In 2011, we expanded our "closed loop" HP ink cartridge recycling capability to include Vietnam (see sidebar below).

\* 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:

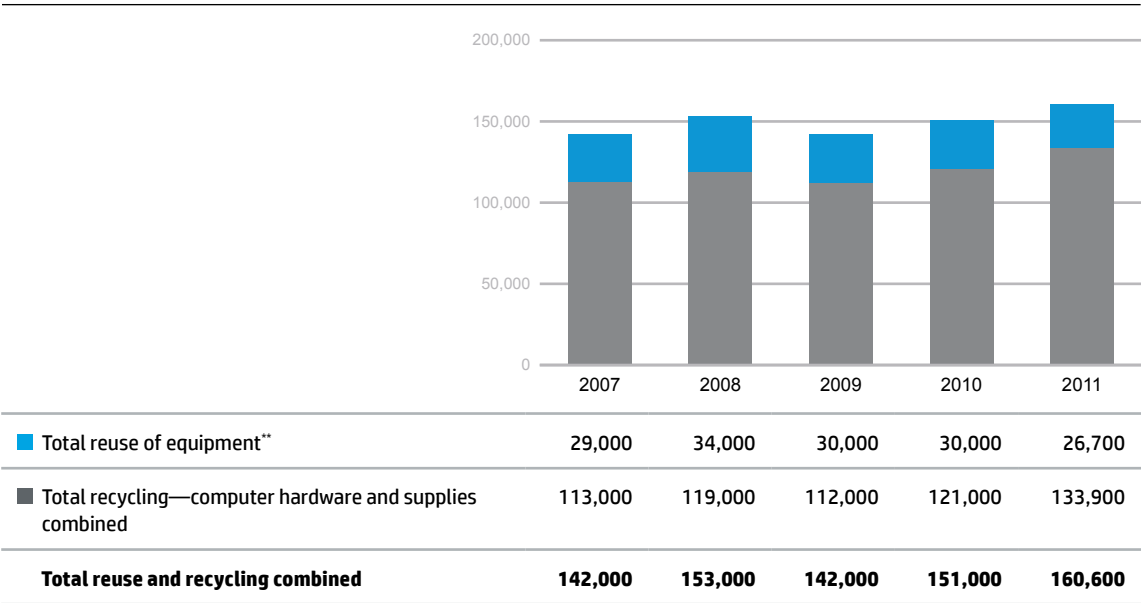
- Approximately 3.44 million hardware units weighing 26,700 tonnes (58.9 million pounds) for reuse and remarketing, nearly 65% returned by business customers.
- Approximately 133,900 tonnes (295 million pounds) for recycling. More than 60% of recycling volume by weight was returned by consumers.

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]



\* 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.

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## 2011 audits and findings

In 2011 ERM audited 14 reuse and 39 recycling vendor facilities in 24 countries.<sup>1</sup> 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.<sup>2</sup>

[Read a statement from ERM.](#)

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

<sup>2</sup> 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.



# HP operations

HP owns and leases more than 770 sites in 95 countries worldwide. Our global scale brings obligations as well as opportunities to benefit communities and the environment. We are committed to growing the positive economic influence of our business, while finding new ways to reduce its environmental impact. We do this through continual innovation and improvement in our business processes and operations.

Our most significant environmental impact from operations is greenhouse gas (GHG) emissions due to the energy our offices, data centers, and manufacturing facilities use. (See [Energy and GHG emissions on page 53](#) for detail.) Other environmental impacts from our operations are those associated with [waste](#) disposal, [paper](#) use, [water](#) consumption, [site remediation](#), and the use of [ozone-depleting substances](#).

Our manufacturing facilities have additional impacts including [wastewater](#) discharges, and permitted releases of [toxic substances](#).

[HP's environmental, health, and safety \(EHS\) management system](#) is designed to ensure that all our facilities comply with applicable regulations and meet company standards.

## About our operational data

Data relating to HP operations is based on our fiscal year (which ends October 31).

In 2011, we collected data from 315 sites (including all HP-owned manufacturing sites and our largest owned and leased office, warehouse, data center, and distribution sites). This accounted for 81% of our total floor space of approximately 7.1 million square meters. We extrapolated data as available from comparable operations, primarily data centers and office space, for the remaining floor space, unless stated otherwise.

We continue to refine the process by which we collect data and calculate trends. In 2011, we began installing Hara energy and sustainability management software to improve our understanding of our operational impacts, more accurately measure and monitor energy consumption, and identify areas with the greatest potential for savings. [HP's Energy and Sustainability Management](#) (ESM) group is also involved in this global implementation. The ESM group will apply the insights and best practices they gain to benefit other customers undertaking similar deployments. We will report on progress in our 2012 Global Citizenship Report.

See the [HP list of major operations on page 65](#).

### Highlights

# 20%

Reduction in GHG emissions from operations between 2005 and 2011, meeting our 2013 goal 2 years early

# 14,700

tonnes

Reduction in amount of nonhazardous waste from 2010, a 14.5% decrease

# 8

billion liters

Global water consumption, a 1.4% decrease from 2010



# Management and compliance

HP is committed to leadership standards in environmental, health, and safety (EHS) performance, including conducting our operations in an environmentally responsible manner and enabling our employees to work without injury at our facilities and other locations.

Our [EHS Management System](#) helps us achieve these objectives and ensures that we comply with regulations and meet company standards across all HP facilities. At its core is our [EHS policy](#).

HP manufacturing operations worldwide are certified to [ISO 14001](#), the international standard for environmental management systems.

To help ensure that we continue to meet our EHS objectives as we grow, newly acquired companies must implement our EHS management system as a part of their integration.

We investigate any allegations of noncompliance with the law to correct any noncompliance, determine the root causes and, if applicable, implement corrective action to help prevent recurrence.

Our management of [health and safety](#), and also [wellness](#), are covered in the [HP people](#) section of this report.

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## Environmental risk assessment

HP's Enterprise Risk Management program evaluates a broad range of risks at the enterprise, business, and functional levels. This enables us to identify critical risks and target mitigation programs at the appropriate level within the company.

In 2011 we conducted a targeted assessment of risks such as regulatory changes, physical changes, energy costs, and water availability for our 26 most critical operations. This assessment showed that we have in place measures to help mitigate these risks, such as energy purchase programs, capital equipment upgrades, and regulation monitoring. We also have implemented numerous energy and water conservation programs and projects that help meet the common objectives of cost reduction, goal attainment, and risk management.

While we anticipate that our operations will become increasingly subject to regulatory and cost challenges related to climate change and water scarcity, we do not believe these changes will disproportionately affect HP relative to the market.

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# Energy and GHG emissions

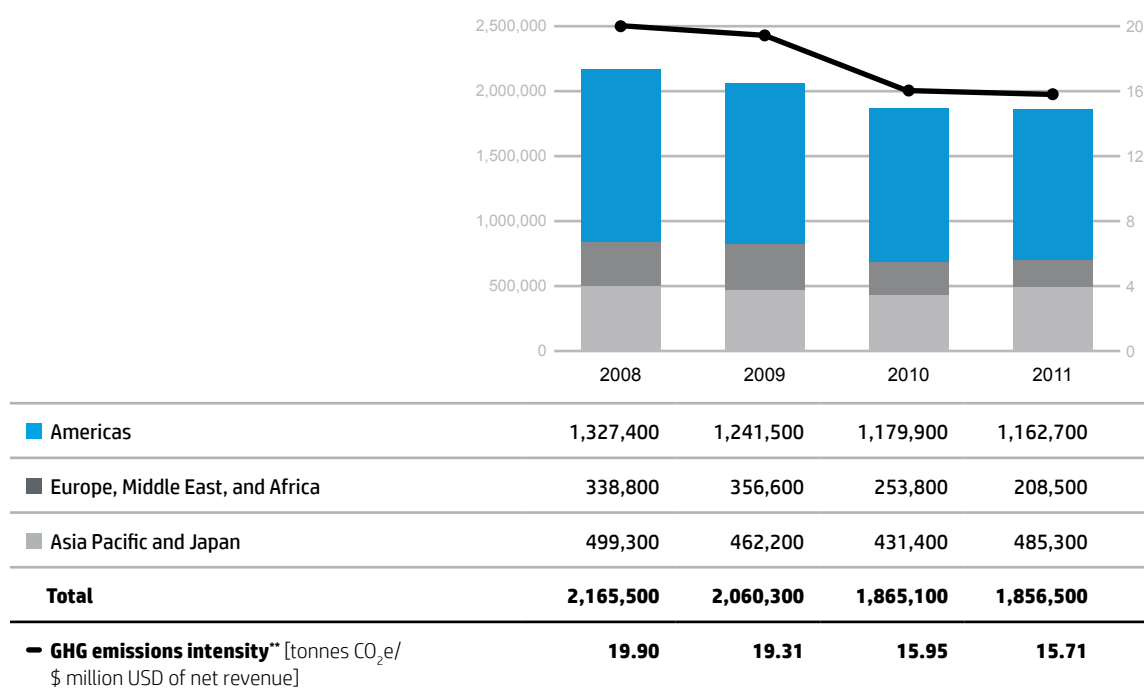
HP is committed to making our global operations more energy efficient, using low-carbon energy sources where possible, and reducing employees' business travel. These activities, in turn, help reduce our climate impact.

Our goal is to cut absolute greenhouse gas (GHG) emissions from our operations (not including employee travel) to 20% below 2005 levels by 2013. We met this goal 2 years early. In 2011, GHG emissions from our operations equaled 1,856,500 tonnes of carbon dioxide equivalent (CO<sub>2</sub>e), a small decrease from 1,865,100 tonnes of CO<sub>2</sub>e in 2010 and a 20% reduction from our 2005 baseline. We adjust our baseline to account for acquisitions and divestitures.

By the end of 2012, we intend to create a new goal for reduction of GHG emissions from operations. We also plan to reset our GHG emissions baseline, based on enhanced data available through new energy and environmental management software.

In 2011 we started recording our GHG emissions intensity to measure our performance relative to business growth. Using this metric, GHG emissions per \$ million USD of net revenue dropped 2% from 2010 to 2011, and decreased 20% compared with 2005.

## Greenhouse gas emissions from operations, 2008–2011\* [tonnes CO<sub>2</sub>e]



\* Total includes Scope 1 and Scope 2 emissions in table, except emissions from HP auto fleet and HP air fleet.

\*\* Worldwide GHG emissions do not include employee travel. Historical emissions intensity values were calculated using HP's annual revenue as characterized in financial reporting and GHG emissions from facilities, the HP auto fleet, and the HP air fleet as reported for that year in the HP Global Citizenship Report (i.e., historical values were not adjusted for corporate acquisitions per the GHG Protocol). Our baseline emissions in 2005 without adjustments for corporate acquisitions (such as Enterprise Data Services in 2008) was 1,551,300 tonnes of CO<sub>2</sub>e. Though our intensity value increased due to the acquisition of Enterprise Data Services in 2008, we have implemented a variety of energy-efficiency measures and made purchases of renewable energy that have subsequently decreased this number.

## Sources of GHG emissions from operations

Energy use (see [Energy efficiency on page 55](#)) accounts for 97% of the GHG emissions generated by our operations and represents one of the largest costs of operating our facilities.

The remaining 3% comes from refrigeration equipment, the use of diesel for backup generators, and a small number of HP manufacturing processes. This includes emissions from the use of perfluorocarbons (PFCs) for semiconductor manufacturing (see sidebar at right).

We commission independent auditor Bureau Veritas Certification to verify our global GHG emissions across our global facilities and our annual reporting under the GHG measurement and reporting protocols of the World Resources Institute and World Economic Forum. Verification of HP's 2011 data will occur after the publication of this report.

## Perfluorocompounds (PFCs)

In 2010 we fully met and concluded our commitment under the U.S. Environmental Protection Agency—Semiconductor Industry Association (SIA) PFC Emission Reduction Partnership, having reduced PFC-related GHG emissions by 87% since 1995, and greatly surpassing the voluntary partnership goal of 10% reduction.

In 2011 we decided to use a more conservative emissions factor to ensure we do not underestimate our PFC-related emissions. This led to larger calculated emissions in 2011 even though our PFC usage continued to drop. Total PFC-related GHG emissions are still less than 0.5% of our total GHG emissions from HP operations.

The small quantities of PFCs now emitted are projected to remain at this level for the foreseeable future. See the breakdown in [Data dashboard: environment on page 69](#).

Sources of GHG emissions from HP operations, 2011\*

Electricity (Scope 2)**	93%
Natural gas (Scope 1)	4%
Refrigerant emissions (Scope 1)	2%
Diesel (Scope 1)	<1%
Manufacturing emissions (Scope 1)	<1%

\* Numbers do not equal 100% due to rounding.  
\*\* Takes into account electricity generated from renewable energy.

About our GHG emissions data

We calculate our GHG emissions according to the [GHG Protocol](#) of the World Business Council for Sustainable Development and the World Resources Institute. In this section, we report HP’s Scope 1, 2, and 3 GHG emissions<sup>1</sup> arising from HP’s operations, automotive and air fleets, and employee business travel.

- Scope 1 emissions include those from the direct use of natural gas, diesel fuel, refrigerants, and PFCs in operations, and from fuel used by HP’s automotive and air fleets.
- Scope 2 emissions are from purchased electricity.
- Scope 3 emissions in our operations result from employee business travel by commercial airlines and rental cars. In other sections of this report, we also disclose estimated Scope 3 emissions from [product manufacturing](#) by suppliers, [product transport](#), and [product recycling](#) (which has a net GHG emissions benefit).

See [Data dashboard: environment on page 69](#) to view HP’s GHG emissions grouped by Scope.

We report our GHG emissions yearly through the [Carbon Disclosure Project \(CDP\)](#) and in 2011 we were included in the [CDP’s S&P 500 Carbon Disclosure Leadership Index](#). The Index highlights constituent companies within the S&P 500 Index based on the level and quality of their climate change information disclosure practices.

Energy efficiency

Improving the energy efficiency of HP’s operations is a fundamental part of our strategy for reducing our energy costs and greenhouse gas (GHG) emissions.

HP operations consumed 4,122 million kilowatt hours (kWh) of energy in 2011, a small decrease from 4,140 million kWh in 2010. We saw an 11% decrease in natural gas use and a 1% increase in electricity use compared with 2010.

In 2011 we started reporting our energy intensity to measure our performance relative to business growth. Using this metric, energy use per \$ million USD of net revenue dropped 1% from 2010 to 2011, and decreased 13% compared with 2005.

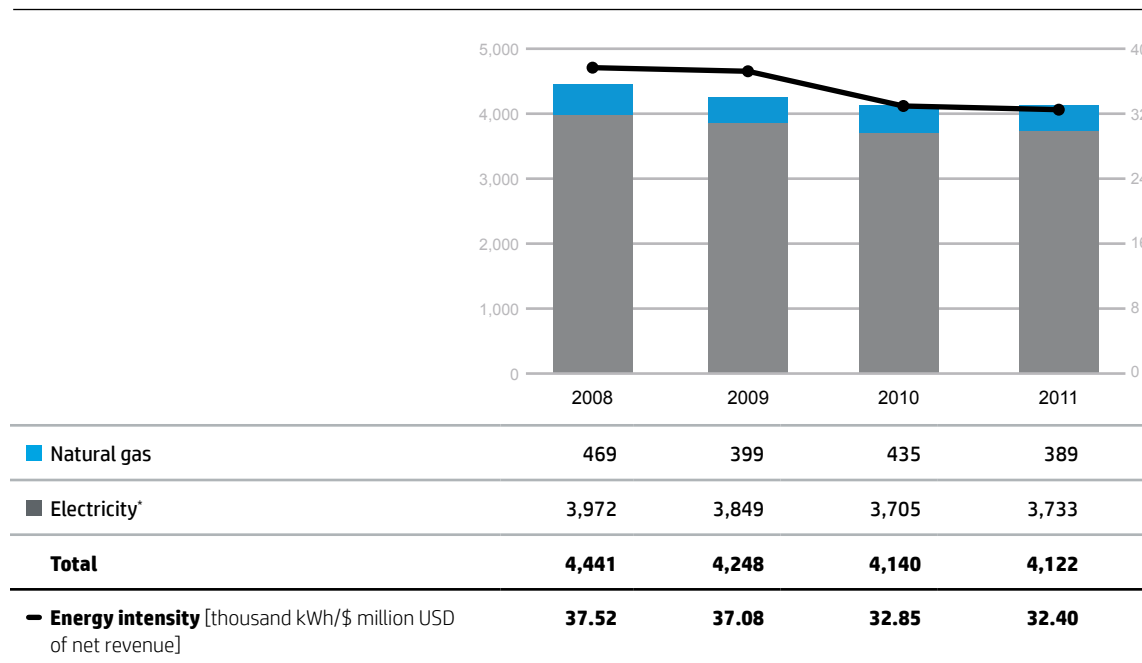
We regularly implement projects to decrease energy use across the company. Initiatives include consolidating our facilities into fewer, more efficient sites, and installing energy-efficient technology and lighting in offices, research labs, and data centers.

Making data centers more efficient

We operate more than 100 client-serving (or “trade”) data centers worldwide, in addition to our six internal data centers located in three cities in the United States. Growing customer demand for data services managed by our trade data centers makes building, retrofitting, and operating highly energy-efficient data centers and consolidating existing facilities all the more important, as typical data centers consume 20 to 40 times as much energy per square meter as offices.

<sup>1</sup> The World Resources Institute (WRI) defines Scope 1, 2, and 3 GHG emissions in its Greenhouse Gas Protocol; see [www.ghgprotocol.org/calculation-tools/faq](http://www.ghgprotocol.org/calculation-tools/faq).

## Energy use from operations, 2008–2011 [million kWh]



\* Includes purchased electricity as well as electricity generated on site.

All design teams for new data centers include an individual responsible for ensuring that energy-efficiency measures are considered throughout the design and build process. HP Enterprise Services, HP Global Real Estate, and HP Critical Facilities Services have established design criteria for new data centers, including the use of modular designs to accommodate future growth and the ability to adapt to local climatic conditions to take advantage of the use of ambient air for cooling. Learn more in [Design on page 34](#).

During 2011, we completed energy-efficiency initiatives at our data centers that we project will save approximately 13 million kWh and avoid an estimated 7,200 tonnes of carbon dioxide equivalent (CO<sub>2</sub>e) emissions on an annual basis. Initiatives included improvement of floor and ceiling ventilation, replacement of existing cooling and air conditioning systems with more efficient models or alternatives, and redesign of server rack layouts for better temperature regulation.

Our award-winning [Wynyard trade data center](#) in the United Kingdom, which opened in January 2010, is powered by 100% renewable energy and is one of the most efficient general purpose data centers in the world. It is cooled using ambient air nearly year-round, and features technology to humidify and recirculate air as necessary to maintain constant conditions, white walls to reduce the amount of lighting needed, and a reflective roof to reduce heat absorption. Wynard has a power usage effectiveness (PUE)<sup>2</sup> rating of 1.2, 40% better than the industry average (1.0 is the best possible rating). In 2011, the center received a Silver Award in the Best Green Energy Efficiency Initiative category at the [International Green Awards™](#).

## HP employees making an impact: David Fuqua

David Fuqua leads a team dedicated to conserving energy in HP's trade data centers. Their completed initiatives in 2011 will save HP 13 million kWh a year. Learn more about [David Fuqua on page 138](#).

Other examples of energy-efficiency initiatives include:

- HP's new Streetsville data center in Mississauga, Ontario, Canada, will be the first data center in our portfolio to use a "Kyoto Wheel" heat exchanger for its primary cooling. The technology reduces the need for mechanical cooling by transferring heat to the outside air stream through a heat wheel heat exchanger. The separation of the outside air stream also significantly reduces the potential for contamination of the server room while maintaining humidity levels. We estimate the technology will save HP up to \$24 million USD over 20 years subsequent to completion of construction in 2012.
- A new server room completed in 2011 at our Boise, Idaho, United States, campus is expected to save an estimated 4 million kWh per year due to extensive use of ambient air and water for cooling. We estimate that the new cooling system will cut the use of traditional chilling units by more than 90%.

<sup>2</sup> Power usage effectiveness is the accepted measure of data center energy efficiency.

- In 2010 we began construction of a new data center in Sydney, Australia, that is expected to have a PUE rating of 1.3, in part due to an innovative roof-mounted “indirect evaporative cooling” system. We anticipate that the data center, which replaces four older facilities, will reduce energy use significantly.
- Variable frequency drives installed on existing air conditioning units at data centers in Austin and Houston, Texas, United States, completed in 2012, will save approximately 10 million kWh a year.

Our six internal data centers are expandable to more than double their existing area, enabling us to accommodate substantial future growth. Each is built with the environment in mind, and our data center in Hockley, near Houston, has obtained the LEED® Gold sustainable building certification. See [Sustainable building design on page 63](#).

**HP employees making an impact:  
Tom Barrington**

Tom Barrington spends his days looking for ways to cut energy and water use across HP’s global facilities—and recently helped HP reach a key milestone in reducing greenhouse gas emissions. [Learn more about Tom Barrington on page 136.](#)

**Data center consolidation**

Data center consolidation helps us reduce costs, phase out older technologies, and improve service levels, while decreasing energy use and associated GHG emissions.

In late 2011, HP Enterprise Services continued its multiyear plan to reduce the number of internal and customer-facing data centers it operates worldwide, and to make existing data centers more energy efficient.

During 2011, we reduced our data center and computer lab floor space by close to 48,000 square meters, while maintaining our presence in all the world’s major regions and our ability to support customers worldwide. Through these changes, including decommissioning servers and switching some physical servers to virtual ones, we estimate that we will avoid about 170 million kWh of energy use and nearly 90,000 tonnes of CO<sub>2</sub>e emissions on an annualized basis.

**Renewable energy**

Switching to renewable energy sources supports HP’s goal to reduce absolute greenhouse gas (GHG) emissions, although our priority remains cutting total energy use by making our operations more efficient.

We purchased approximately 440 million kilowatt hours (kWh) of renewable energy worldwide in 2011, equivalent to more than 10% of the overall electricity use in our facilities and a 41% increase since 2010. This includes energy generated on-site and the renewable energy credits (RECs) we buy as part of electricity contracts in the United States. This is in addition to the renewable energy available by default in the power grid, and achieves our goal for 2012<sup>1</sup> ahead of time.

We are committed to maintaining renewables as a part of our energy mix to make continued progress in emissions reductions.

The following table highlights some renewable energy initiatives from 2011.

Region	Initiative
Americas	We installed more than 1,400 roof-top solar panels at our data center in Suwanee, Georgia, United States, which we estimate will generate approximately 450,000 kWh per year, enough to power the center’s noncritical facilities.
Europe, Middle East, and Africa	We estimate that nearly 500 solar panels installed at HP’s facilities in Bad Homburg and Böblingen, Germany, will generate approximately 170,000 kWh of electricity per year.

See more details about renewable energy purchasing in [Data dashboard: environment on page 69](#).

<sup>1</sup> Goal for 2012: Double voluntary purchases of renewable energy to 8% of electricity use (in addition to the renewable energy available by default in the power grid).



# Travel

Many HP employees travel as part of their work. In 2011, employee business travel generated 461,600 tonnes of carbon dioxide equivalent (CO<sub>2</sub>e), a 3% increase from 2010. Emissions per employee decreased 4% over the same period, and have decreased by 51% since 2007. The majority of greenhouse gas (GHG) emissions from business travel are from commercial air travel (70%), followed by use of the HP auto fleet (27%) by our mobile sales force, and the HP air fleet (3%).

We work to reduce these emissions by promoting more efficient forms of transport such as smaller cars and rail travel instead of air, and encourage digital collaboration alternatives that avoid travel altogether. When employees book travel, we provide them with information about the emissions associated with their journey so that when multiple options are available, they can choose the one with the least environmental impact. HP's travel booking system advises employees on alternatives to nonessential travel such as Halo videoconferencing technology.<sup>1</sup> In 2011, employee use of Halo studios at HP facilities avoided an estimated 27,500 tonnes of CO<sub>2</sub>e emissions from air and car travel that would have been generated had the meetings taken place in person.<sup>2</sup> See [Environmental sustainability on page 19](#).

In 2011 we joined the [Clinton Global Initiative's Fleets for Change](#) and committed to reduce GHG emissions from our U.S. auto fleet by 10% by 2015, compared with 2010 on a per unit basis. We will work with Fleets for Change to refine our baseline emissions calculations and measure progress towards this goal by replacing high fuel consumption vehicles, reducing the distance traveled by employees, and encouraging lower emission practices.

We also launched an initiative in 2011 with Avis to reduce our U.S. rental car fuel consumption and related GHG emissions, with a targeted decrease of 15% per day driven by 2012, compared with 2011. Under the initiative, Avis will provide hybrid and other fuel-efficient vehicles certified by the U.S. Environmental Protection Agency's SmartWay program. We estimate the savings will cut fuel costs by \$1 million USD.

See detailed travel data in [Data dashboard: environment on page 69](#).

GHG emissions from employee business travel, 2007–2011 [tonnes CO<sub>2</sub>e]

	2007	2008	2009	2010	2011
<b>Total emissions</b>	<b>464,400</b>	<b>510,500</b>	<b>365,800</b>	<b>448,800</b>	<b>461,600</b>
Commercial air travel	289,000	320,000	214,000	304,000	322,000
HP air fleet	14,300	21,600	13,400	12,500	13,200
HP auto fleet	161,100	168,900	138,400	132,300	126,400
Emissions per employee*	2.70	1.59	1.20	1.38	1.32

\* Based on employee numbers as reported in past Global Citizenship Reports.

<sup>1</sup> HP divested its HP Visual Collaboration business, including Halo, to Polycom, Inc., in July 2011, but continues to provide these functionalities at our facilities.  
<sup>2</sup> For air travel avoidance, an average of 1,609 miles each way per round trip (average of short-, medium-, and long-haul flights at HP), and a carbon dioxide (CO<sub>2</sub>) footprint per mile of 199g CO<sub>2</sub>e is used. Car travel to/from airport on both ends is also considered. Of the 35% of meetings that avoid travel, only 1.4 persons are assumed to avoid travel in each meeting. Usage depends on a company's travel and meeting policies.

## Employee commuting

Although GHG emissions from employee commuting are not directly within HP's control, we offer programs that encourage employees to reduce them.

In the United States, HP enables employees to take advantage of WageWorks and use pretax income to pay for public transport costs. Carpooling options, such as our partnership with rideshare.org in the San Francisco Bay Area, are supported at U.S. locations and at other facilities around the world. Sites in various locations provide free shuttles from local public transportation.

We also support sustainable forms of transport such as cycling. At our Bristol site in the United Kingdom, for example, the local employee-led HP Sustainability Network chapter established a

bicycle users group (BUG) that provides information, safe routes and maps, bike storage and loan facilities, discounts on bikes and equipment, and even a store where employees can buy or borrow equipment. Of the 900 people at the site, 180 are BUG members. Similar programs are available at numerous HP locations globally.

Many HP employees work outside the traditional office—at home, at customer facilities, or at shared offices where people are free to use any available desk—and often divide their work time between these locations. Giving employees flexibility on where they work reduces commutes to the office and can improve efficiency and work-life balance. When appropriate, we also encourage employees to travel to work at times that avoid peak commuting periods, thereby reducing their traveling time, associated stress, and GHG emissions.

# Waste and recycling

In 2011, HP generated approximately 93,800 tonnes of waste. The vast majority, 92%, was nonhazardous consisting of solid waste such as paper, pallets, metals, and packaging. Our hazardous waste<sup>1</sup> consists mainly of liquid waste from our ink manufacturing facilities and batteries from our data centers.

These two types of waste require different approaches, but we aim to reduce the environmental impact of both through a policy of reduce, reuse, and recycle.

We recycle 82.2% of nonhazardous waste and aim to minimize the amount sent to landfill.

We reuse electronic equipment when appropriate, and otherwise we recycle it responsibly through the same [programs](#) that we make available to our customers.

We help ensure that hazardous waste is managed in an environmentally responsible manner through a combination of contractual commitments with, and internal and external audits of, waste disposal facilities and service providers who handle the waste on our behalf. These are carried out as part of the approval process for all new facilities and periodically for approved facilities.

## Nonhazardous waste

HP generated approximately 86,400 tonnes of nonhazardous waste in 2011, a 14.5% decrease compared with 2010.<sup>2</sup> This was due to ongoing programs to reduce waste at the source as well as the elimination of some operations that generated high volumes of material.

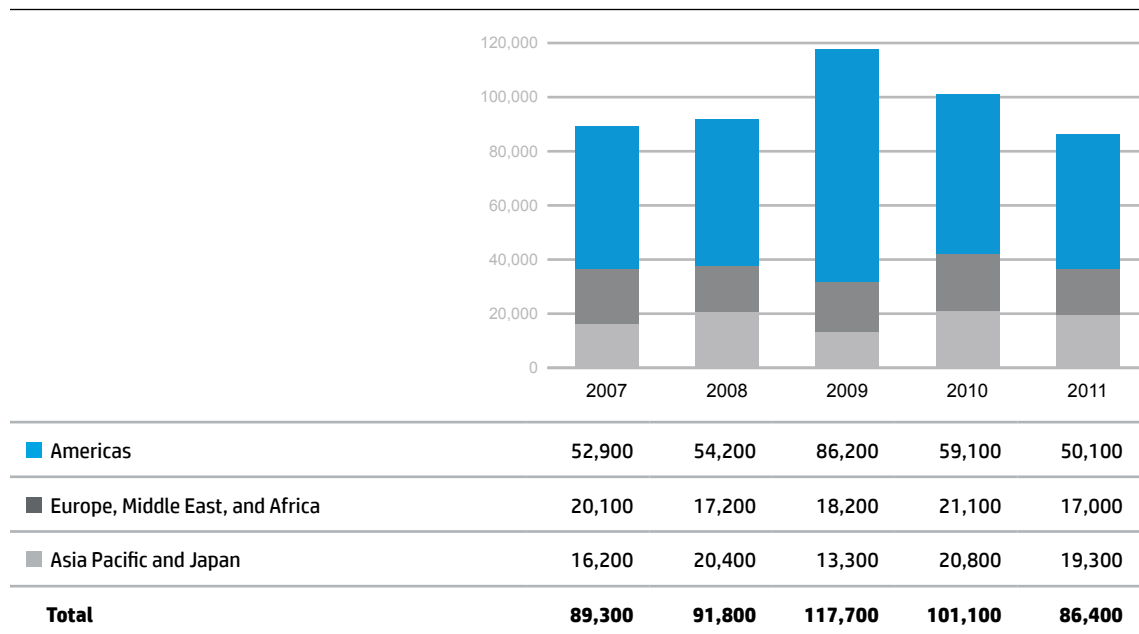
In 2011, we reused, recycled, or incinerated for energy 71,000 tonnes of nonhazardous waste, achieving a landfill diversion rate of 82.2%. This decrease from 84.9% in 2010 was due to the closure of some operations that had high diversion rates, including distribution and product completion facilities. Nonetheless, HP's total waste volume was down year over year, and the amount sent to landfill in 2011 remained roughly the same as in 2010, due to successful overall waste reduction efforts.

About one-third of nonhazardous waste generated in 2011 was paper. We are committed to reducing the amount of paper we use, and dispose of, to help decrease our environmental impact and save money. Read about our efforts to reduce [paper use and purchase paper from sustainable sources](#).

<sup>1</sup> Hazardous waste classification varies by country. For ease of calculation, HP data includes some waste not considered hazardous in the country where it is generated.

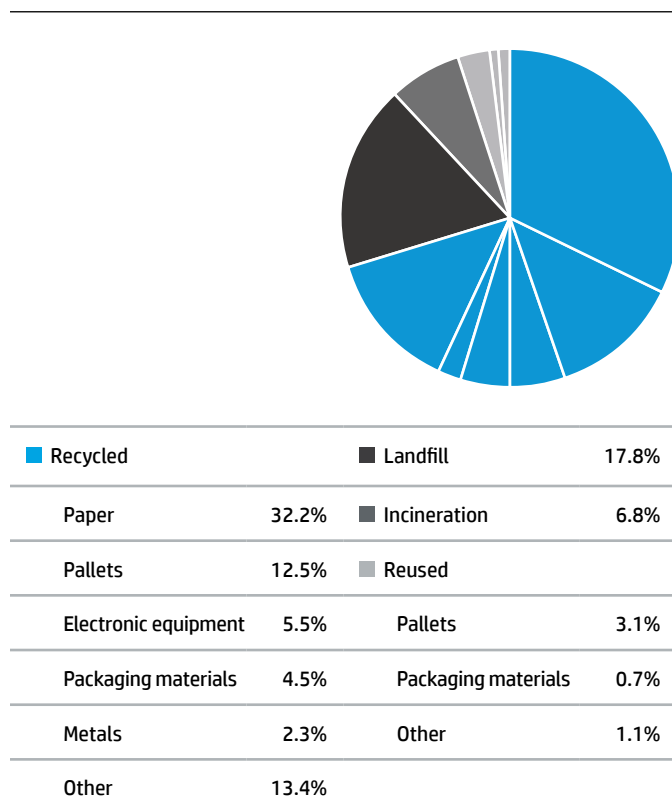
<sup>2</sup> We have restated our 2010 nonhazardous waste data (from 79,800 tonnes as reported in the HP 2010 Global Citizenship Report) to ensure greater consistency with the methodology that we use to calculate other environmental data, including nonhazardous waste in prior years.

## Nonhazardous waste, 2007–2011\* [tonnes]



\* We have restated our 2010 nonhazardous waste data (from 79,800 tonnes as reported in the HP 2010 Global Citizenship Report) to ensure greater consistency with the methodology that we use to calculate other environmental data, including nonhazardous waste in prior years. Some segments do not add up to total due to rounding.

## Nonhazardous waste composition, 2011\* [percentage of total]



\* Segments do not equal 100% due to rounding.

## Recycling programs

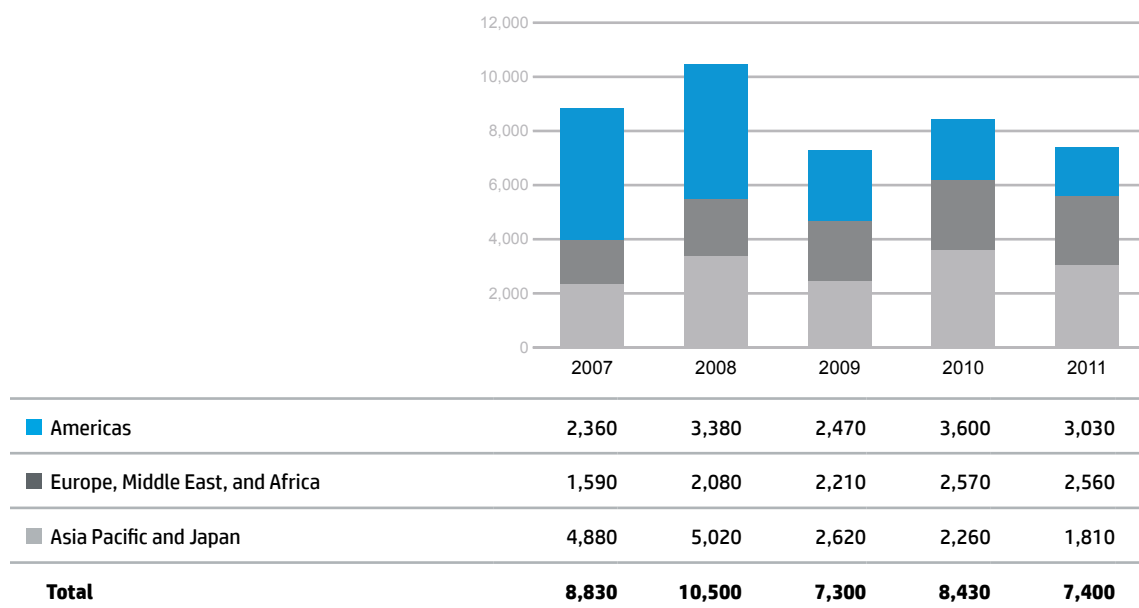
Our global recycling programs play a key role in supporting our efforts to reduce the amount of waste sent to landfill.

HP employees can recycle paper, plastics, and batteries at convenient recycling points within many of our buildings. We also recycle glass, plastic, and aluminum containers disposed of in our dining rooms and conference facilities. Individual sites often organize expanded recycling programs. At our Surya and Suhas Park facilities in Bangalore, India, for example, waste wood and paper is recycled to make stationery, batteries and waste oils are sent to locally approved recycling vendors, and obsolete electronic equipment is processed through an HP-approved vendor.

## Hazardous waste

HP generated approximately 7,400 tonnes of hazardous waste in 2011, a 12% decrease compared with 2010. This is due to ongoing waste reduction programs at our manufacturing sites and fewer battery replacements at our data centers in 2011.

## Hazardous waste, 2007–2011\* [tonnes]



\* 2009 and 2010 data for the Europe, Middle East, and Africa region, and the global totals for those years, were restated to correct reporting errors in the 2009 and 2010 Global Citizenship Reports. Some segments do not add up to total due to rounding.

# Water

In 2011, HP used just over 8 billion liters of water worldwide, predominantly for domestic use in buildings, cooling, and landscape irrigation. This represents a 1.4% decrease compared with 2010.

Although HP's operations are not water intensive, we recognize that freshwater consumption is a growing concern globally. We participate in the Carbon Disclosure Project's [Water Disclosure Project](#) to enhance our understanding of the issue and help provide a clearer picture of our corporate water use.

Some of our operations are located in water-stressed regions, making the availability and quality of freshwater an issue for our business, customers, and communities.

In 2011, HP developed a new water-use goal following an extensive analysis of our facilities' water impact. Our analysis took into account the availability of freshwater where a facility is located as well as the facility's usage, reflecting the fact that the impacts of water use are felt locally, not globally. We based our analysis on the

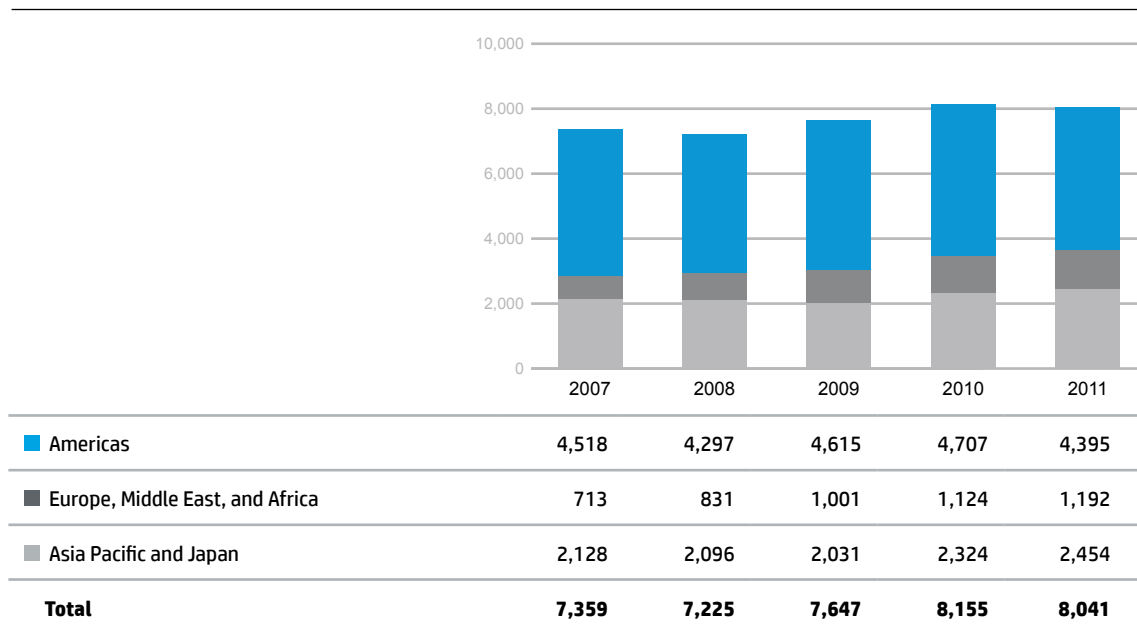
Global Water Tool developed by the World Business Council for Sustainable Development (WBCSD) and data produced by the University of New Hampshire.

We plan to implement water-saving measures at all facilities that both of these sources identified as water stressed, as well as some sites identified by only one of the sources. In total, we plan to introduce 35 measures in 10 countries by 2015. Examples include flow restrictors, waterless urinals, and rainwater harvesting. We expect these measures to reduce freshwater use across those sites by 77.7 million liters, equivalent to 3% of 2011 consumption at those locations.<sup>1</sup> Large reductions may not be possible at all the sites identified, as many have already made considerable savings or are office-based locations with limited options for decreasing water use.

HP recognizes that our supply chain also has a significant amount of water usage, so in the coming years we will be working to understand the issue and identify possible actions to reduce our total water footprint.

<sup>1</sup> Based on [http://water.epa.gov/learn/kids/drinkingwater/water\\_trivia\\_facts.cfm](http://water.epa.gov/learn/kids/drinkingwater/water_trivia_facts.cfm).

## Water consumption, 2007–2011\* [million liters]



\* 2010 water consumption data is revised to reflect updates to reported data. Some segments do not add up to total due to rounding.

Many facilities, including those in water-stressed regions, are taking steps to cut water use or use alternatives to freshwater sources. Since 2007, HP's facilities in Singapore have been using "New Water" to reduce demand on freshwater. New Water is treated wastewater purified using microfiltration, reverse osmosis, and ultraviolet treatment, as well as conventional treatment processes. The water is potable but is mostly used by industries requiring high purity water.

New Water accounts for more than two-thirds of the facilities' annual water consumption and is 20% cheaper than standard potable water, helping us to save more than \$3.5 million USD since 2007.

## Wastewater

Wastewater from our manufacturing operations is not a significant environmental issue for HP. Office wastewater is discharged under local regulations to local treatment facilities.

In 2011, our seven imaging and printing product manufacturing facilities generated 1.296 billion liters of manufacturing wastewater. These effluents are discharged under a permit, and treated at a locally owned and operated treatment plant. We have procedures in place designed to prevent unauthorized discharges of chemicals to wastewater systems, and ensure we do not discharge wastewater directly from HP operations to surface water or groundwater.

See performance data, including regional breakdown, in [Data dashboard: environment on page 69](#).

**"In using the Global Water Tool to prioritize water-saving measures at its facilities worldwide, HP has taken appropriate initial steps towards implementing a risk-based water management strategy. It is also reassuring that HP is using the tool to evaluate water risk in its supply chain. HP's efforts should be evaluated in terms of its success in reducing the company's exposure to water risk, and improving water security for all users in the regions where it operates."**

—Charlie Iceland, Senior Associate, World Resources Institute

# Sustainable building design

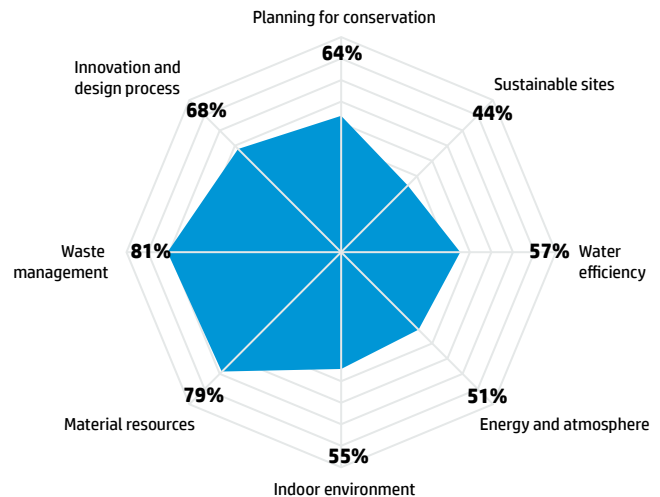
In 2011 HP completed its 3-year Global Workplace Initiative that aimed to cut costs, energy use, and water consumption by reducing the amount of space we occupy. We continue to reduce the environmental footprint of our real estate by using our offices more efficiently and improving the design of new and existing buildings. For example:

- We consolidated five buildings into one at Ojima, Japan. The new facility employs sustainable design features such as increased use of natural ventilation and lighting, wastewater and rain water recycling, water-efficient landscaping, and recycled and locally sourced building materials.
- Energy-efficient LED lighting at several facilities in India and Singapore will contribute to estimated savings of more than 2 million kilowatt hours (kWh) in electricity usage annually.

As well as saving energy, features such as increased use of natural light help to create comfortable and productive workplaces and can help improve our facilities' appearance. Consolidating office space has the additional benefit of freeing up office buildings for potential use by other organizations, so overall, fewer offices need to be constructed.

Our custom sustainable building design checklist provides guidance for project managers when planning office improvements. It covers a wide range of sustainable design features, such as energy use, materials, waste management, and water efficiency, and helps identify cost-effective solutions for each area. A scorecard completed at the end of each project notes the building's performance against the checklist and helps identify areas for further enhancement.

## Sustainable building design progress summary (Percentage of 27 projects tracked addressing each scorecard element through 2011)



In some cases, we apply for U.S. Green Building Council LEED® certification. In 2011, three HP facilities were certified by LEED, including our Hockley data center in Texas, United States, and our Finnish headquarters at Espoo, both of which achieved Gold-level certification. This brings the total number of HP LEED certified facilities to four. Three additional facilities are due to achieve LEED certification in 2012, including those in Kiryat Gat (Certified) in Israel, Palo Alto (Platinum) and Sunnyvale (Gold) in California, United States.

# Toxics release inventory

Five HP operations worldwide that are responsible for the manufacture of imaging and printing products require the use of several chemicals listed on the U.S. Environmental Protection Agency (EPA) Toxics Release Inventory (TRI). Together, those sites account for all

of HP's reportable TRI releases. These releases continue to decrease as we eliminate or scale down the HP processes that use those chemicals due to changes in our business operations.



## Disposition by type of TRI material, 2008–2010 [tonnes]\*

Chemical	Emitted to air				Discharged to water (to sewer/off-site treatment facility)				Shipped off-site for recycle/energy recovery				Shipped off-site for treatment or disposal				Total			
	2007	2008	2009	2010	2007	2008	2009	2010	2007	2008	2009	2010	2007	2008	2009	2010	2007	2008	2009	2010
N-methyl pyrrol- idone	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	451.5	357.6	268.1	259.5	0.0	0.0	0.0	0.0	451.5	357.6	268.1	259.5
Nitric acid	0.5	0.5	0.1	0.1	0.0	0.0	0.0	0.0	9.6	0.0	0.0	0.0	21.9	5.9	11.3	4.8	31.9	6.4	11.4	4.8
Nitrates	0.0	0.0	0.0	0.0	12.3	9.3	6.1	6.9	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	12.4	9.3	6.1	6.9
Lead	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.1	8.3	0.9	0.9	0.0	0.0	0.0	0.0	7.1	8.3	0.9	0.9
Xylene	5.3	6.5	7.2	8.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.9	12.7	14.0	17.4	17.2	19.3	21.2	26.3
Glycol ethers**	NA	9.4	18.8	9.3	NA	0.0	0.0	0.0	NA	0.0	0.0	0.0	NA	41.8	80.8	26.9	NA	51.2	99.6	36.3
All others	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.7	0.2	0.0	0.0
<b>Total</b>	<b>5.8</b>	<b>16.7</b>	<b>26.1</b>	<b>18.3</b>	<b>12.3</b>	<b>9.3</b>	<b>6.1</b>	<b>6.9</b>	<b>468.1</b>	<b>365.8</b>	<b>269.0</b>	<b>260.5</b>	<b>34.5</b>	<b>60.5</b>	<b>106.1</b>	<b>49.1</b>	<b>520.8</b>	<b>452.0</b>	<b>407.3</b>	<b>334.8</b>

\* The substances with global totals greater than 1 tonne are shown. TRI reports are due to the U.S. EPA July 1 each year, so the most recently completed reporting year is 2010.

\*\* Glycol ether data for 2009 have been restated to correct a unit conversion error. Totals for 2009 reflect the corrected data.

# Ozone-depleting substances

HP facilities use ozone-depleting substances (ODSs) in cooling and air conditioning systems. Although these systems are sealed, leaks during operation and maintenance could result in emissions. We continue to replace chlorofluorocarbons (CFCs) in our systems with hydrofluorocarbons (HFCs). Although HFCs are greenhouse gases, they do not deplete the ozone layer. We are also starting to replace HFC-based cooling systems with HFC-free equivalents when they reach the end of their operational lives. These are not ODSs and have no or very low global warming potential.

We do not measure ODS emissions but rather estimate leakage using guidance from the Intergovernmental Panel on Climate Change.<sup>1</sup>

See performance data, including regional breakdown, in [Data dashboard: environment on page 69](#).

<sup>1</sup> To estimate these emissions, HP uses EPA Climate Leaders Greenhouse Gas Inventory Protocol Core Module Guidance May 2008, in conjunction with global warming potential values from [www.ipcc.ch/publications\\_and\\_data/ar4/wg1/en/ch2s2-10-2.html](http://www.ipcc.ch/publications_and_data/ar4/wg1/en/ch2s2-10-2.html).

# Remediation

Where needed, HP conducts or contributes to soil and groundwater remediation to clean up contaminated sites.

This includes remediation at:

- Eighteen sites where chemical releases from historical HP or predecessor operations occurred
- Six sites where HP’s wastes were managed by third parties and releases occurred

We apply the risk prevention and management procedures of our [environmental, health, and safety \(EHS\) management system](#) to help prevent and respond to chemical spills at HP facilities. One spill at an HP facility occurred in 2011 that required soil remediation on HP property. We reported the incident promptly to the local environmental authority and initiated clean-up under its oversight.

## Biodiversity

HP’s direct operational impact on biodiversity is minimal because we build very few facilities relative to our size and growth. When we do build, we often use previously developed land, which reduces our expansion into undeveloped areas.

However, we have an indirect impact on biodiversity through forestry because we sell and use significant amounts of paper. Our [Environmentally Preferable Paper Policy](#) sets out our standards for buying, selling, and using paper and paper-based packaging. We increasingly source paper from suppliers that demonstrate sustainable forestry and responsible manufacturing practices, and we strive to reduce the amount of paper we use in our operations and recycle paper when possible. Read more about [paper use](#) at HP.

# HP list of major operations

More than 100,000 square meters	
Americas	
Boise, ID*	United States
Colorado Springs, CO	United States
Corvallis, OR*	United States
Cupertino, CA	United States
Houston, TX*	United States
Palo Alto, CA	United States
Plano, TX	United States
Roseville, CA	United States
San Bernardino, CA	
Europe, Middle East, and Africa	
Dublin Mfg*	Ireland

50,000–100,000 square meters	
Americas	
Aguadilla, PR*	Puerto Rico
Ft. Collins, CO	United States
Ft. Worth, TX	United States
Marlborough, MA	United States
Pontiac, MI	United States
San Diego, CA*	United States
Sandston, VA	United States
Sandston, VA	United States
Woodland, CA	United States

\* Site/operation included in HP’s global ISO 14001 certificate. In some cases, multiple locations in close proximity are considered one “site” for the purposes of the certification.

## 50,000–100,000 square meters

### Asia Pacific and Japan

Bangalore	India
Bangalore HPGS	India
Singapore DRD <sup>*,***</sup>	Singapore
Singapore SGP	Singapore

### Europe, Middle East, and Africa

Grenoble	France
Böblingen	Germany
Erskine <sup>**,***</sup>	United Kingdom

<sup>\*</sup> Site/operation included in HP's global ISO 14001 certificate. In some cases, multiple locations in close proximity are considered one "site" for the purposes of the certification.

<sup>\*\*</sup> ISO 14001 certified but not part of the global certificate.

<sup>\*\*\*</sup> OHSAS 18001 certified site.

## 25,001–50,000 square meters

### Americas

Sao Bernardo do Campo	Brazil
Markham	Canada
Mississauga	Canada
Mississauga—Canadian HQ	Canada
Heredia	Costa Rica
Guadalajara	Mexico
Alpharetta, GA	United States
Andover, MA	United States
Auburn Hills, MI	United States
Austin, TX	United States
Des Moines, IA	United States
Herndon, VA	United States
Hockley, TX	United States
Houston, TX	United States
Indianapolis, IN	United States

## 25,001–50,000 square meters

Irving, TX	United States
LaVergne, TN	United States
Louisville, CO	United States
Mountain View, CA	United States
Salt Lake City, UT	United States
Satellite Boulevard Data Center, GA	United States
Sunnyvale, CA	United States
Sunnyvale Palm, CA <sup>**,***</sup>	United States
Tulsa, OK	United States
Urbandale, IA	United States
Vancouver, WA	United States

### Asia Pacific and Japan

Tokyo—Japan HQ	Japan
Seoul	Republic of Korea
Cyberjaya HP Global Center (CJO)	Malaysia
Taguig City	Philippines
Singapore	Singapore
Taipei	Taiwan

### Europe, Middle East, and Africa

Sofia	Bulgaria
Rüsselsheim	Germany
Rehovot <sup>*</sup>	Israel
Amersfoort	Netherlands
Barcelona Sant Cugat <sup>*</sup>	Spain
Sant Cugat del Valles	Spain
Bucharest <sup>**,***</sup>	Romania
Billingham	United Kingdom
Bristol	United Kingdom

<sup>\*</sup> Site/operation included in HP's global ISO 14001 certificate. In some cases, multiple locations in close proximity are considered one "site" for the purposes of the certification.

<sup>\*\*</sup> ISO 14001 certified but not part of the global certificate.

<sup>\*\*\*</sup> OHSAS 18001 certified site.



# Tech gallery: environment

HP innovations help address critical environmental and social challenges. We design with the environment in mind, and apply and scale technology to transform and improve how people live and work. This gallery is just a sampling.

HP products, services, and solutions enable people to do more while reducing resource consumption and waste. [Shop the EcoSolutions Store](#).

	Printing	Personal computing	Data center	Software	Services and solutions
<a href="#">HP 3PAR Storage</a>			•		
<a href="#">HP Advantage Monitors</a>		•			
<a href="#">HP Auto-On/Auto-Off and Instant-on Technology</a>	•				
<a href="#">HP Carbon Emissions Management Service</a>					•
<a href="#">HP Carbon Footprint Calculator</a>	•	•		•	
<a href="#">CeNSE</a>					•
<a href="#">HP “closed loop” ink cartridge recycling</a>	•				
<a href="#">HP Color LaserJet CM4540 MFP</a>	•				
<a href="#">HP Compaq 8200 Elite Ultra-slim Desktop PC</a>		•			
<a href="#">HP Critical Facilities Services</a>			•		•
<a href="#">HP Data Center Smart Grid</a>			•	•	•
<a href="#">HP Deskjet 3050A e-All-in-One</a>	•				

	Printing	Personal computing	Data center	Software	Services and solutions
<a href="#">HP EcoPOD data center</a>			•		•
<a href="#">HP EcoSMART Fleet and Console</a>	•			•	
<a href="#">HP EliteBook notebook PCs</a>		•			
<a href="#">HP ENVY<sup>110</sup> e-All-in-One</a>	•				
<a href="#">HP ENVY<sup>14</sup> Spectre Ultrabook™</a>		•			
<a href="#">HP Energy and Sustainability Management (ESM)</a>					•
<a href="#">HP HDPE Reinforced Banner</a>	•				
<a href="#">HP Insight Control and Power Advisor</a>			•	•	
<a href="#">HP LaserJet Pro P1102 printer</a>	•				
<a href="#">MagCloud</a>	•				•
<a href="#">HP Managed Print Services</a>	•				•
<a href="#">HP Officejet Pro 8600 e-All-in-One series</a>	•				
<a href="#">HP Photosmart ML2000D Minilab Printer</a>	•				
<a href="#">HP Power Assistant for PCs</a>		•		•	
<a href="#">HP ProCurve</a>			•		
<a href="#">HP Project Moonshot</a>			•		
<a href="#">HP ProLiant G7/Gen8 servers</a>			•		
<a href="#">HP Smart Print</a>	•			•	
<a href="#">Sustainable data center</a>			•		
<a href="#">HP T300 Color Inkjet Web Press</a>	•				
<a href="#">HP Thermal Logic</a>			•	•	•
<a href="#">HP thin client computers</a>		•			
<a href="#">HP TouchSmart and Omni All-in-One PCs</a>		•			
<a href="#">HP Web Jetadmin</a>	•			•	
<a href="#">Wynyard data center</a>			•		•
<a href="#">HP Z Workstations</a>		•			

# Data dashboard: environment

Products and solutions	2007	2008	2009	2010	2011
<b>Manufacturing: Greenhouse gas (GHG) emissions from product manufacturing (estimated)*</b>					
Aggregate first-tier suppliers Scope 1 and 2 emissions [tonnes carbon dioxide equivalent (CO <sub>2</sub> e)]	3,500,000	4,100,000	3,500,000	4,800,000	
Coverage [percentage of first-tier supplier spend captured]	81%	86%	91%	95%	
Supplier GHG emissions intensity [tonnes CO <sub>2</sub> e/first-tier supplier spend, 2007 = 100%]	100%	96%	96%	94%	
<b>Transport: GHG emissions from product transport (estimated)** [tonnes CO<sub>2</sub>e]</b>	2,000,000	1,800,000	1,700,000	1,900,000	1,900,000

\* Refers to first-tier suppliers for manufacturing, materials, and components. Emissions are estimated based on suppliers' dollar volume of HP business compared with their total revenue. The majority of these companies report on a calendar year basis. 2010 is the most recent year data is available.

\*\* Does not include data from all recent HP acquisitions.

Product reuse and recycling*	2007	2008	2009	2010	2011
<b>Total cumulative recycling—computer hardware and supplies combined [tonnes]</b>	532,000	651,000	763,000	884,500	1,018,400
<b>Total cumulative recycling—computer hardware and supplies combined [million pounds]</b>	1,173	1,435	1,682	1,949	2,245
<b>Total reuse and recycling combined [tonnes, approximate]</b>	142,000	153,000	142,000	151,000	160,600
Total reuse of equipment** [tonnes, approximate]	29,000	34,000	30,000	30,000	26,700
Total recycling—computer hardware and supplies combined [tonnes]	113,000	119,000	112,000	121,000	133,900
<b>Number of countries and territories with HP return and recycling programs</b>	52	53	56	58	60



Product reuse and recycling*	2007	2008	2009	2010	2011
<b>Total recycling, by region</b> [tonnes]	113,000	119,000	112,000	121,000	133,900
Americas	30,200	36,000	37,500	38,600	49,600
Europe, Middle East, and Africa	76,500	76,700	69,300	76,300	77,100
Asia Pacific and Japan	6,100	6,700	5,600	5,900	7,200
<b>Total recycling, by type</b> [tonnes]	113,000	119,000	112,000	121,000	133,900
Hardware	95,800	98,600	90,500	99,100	113,650
HP LaserJet toner cartridges***	15,000	19,000	20,100	19,600	18,550
HP ink cartridges***	2,000	1,850	1,800	2,200	1,700
<b>HP LaserJet toner cartridge recycling</b>					
Percentage of LaserJet market covered by program	88%	90%	90%	92%	94%
Composition					
Percentage of materials recycled into new products	59%	76%	80%	85%	82%
Percentage of materials used for energy recovery	41%	24%	20%	15%	14%
Percentage reuse of components****					4.0%
Percentage material in storage—pending processing****					0.0%
Percentage incineration****					0.0%
Percentage landfill****					0.0%
<b>HP ink cartridge recycling</b>					
Percentage of ink market covered by program	89%	88%	88%	87%	88%
Composition					
Percentage of materials recovered for recycling	53%	59%	64%	73%	74%
Percentage of materials used for energy recovery	21%	38%	31%	23%	22%
Percentage reuse of components****					0.0%
Percentage material in storage—pending processing****					0.2%
Percentage incineration****					4.0%
Percentage landfill****					0.0%
<b>GHG emissions avoided from product recycling (estimated)*****</b> [tonnes CO <sub>2</sub> e]	210,000	300,000	210,000	225,000	250,000

\* 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 are calendar year. The remaining data is based on the HP fiscal year. Segments may not add up to totals due to rounding.

\*\* The decrease in tonnage from 2007 to 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.

\*\*\* Includes cartridges returned by customers and cartridges from HP internally through 2010. 2011 figure is cartridges returned by customers only.

\*\*\*\* This category of data was added in 2011.

\*\*\*\*\* According to the [U.S. Environmental Protection Agency's Waste Reduction Model \(WARM\) Tool](#), CO<sub>2</sub>e reductions from recycling are calculated per the following formula: 1.858 kg CO<sub>2</sub>e/kg recovered electronic waste.

HP operations (also see GHG emissions below)	2007	2008	2009	2010	2011
<b>Energy use</b> [million kilowatt hours (kWh)]		4,441	4,248	4,140	4,122
<b>Energy intensity</b> [thousand kWh/\$ million USD of net revenue]		37.52	37.08	32.85	32.40
<b>Direct energy use in operations (corresponds to Scope 1 emissions)</b>					
Electricity (generated on site) [million kWh]			0	13	3
Natural gas* [million kWh]		469	399	435	389
Americas		296	266	267	232
Europe, Middle East, and Africa		153	127	160	144
Asia Pacific and Japan		20	6	9	12
Renewable (generated on site) [million kWh]			2	2	2
Diesel/gas/oil**		NA	NA	NA	NA
<b>Indirect energy use (corresponds to Scope 2 emissions)</b>					
Electricity (purchased)* [million kWh]		3,972	3,847	3,690	3,728
Americas		2,417	2,333	2,223	2,223
Europe, Middle East, and Africa		879	908	895	870
Asia Pacific and Japan		677	606	572	636
Voluntary purchases of renewable energy [million kWh energy and renewable energy credits, in addition to the renewable energy available by default in the power grid]		102	131	311	440
<b>Nonhazardous waste***</b> [tonnes]	89,300	91,800	117,700	101,100	86,400
Americas	52,900	54,200	86,200	59,100	50,100
Europe, Middle East, and Africa	20,100	17,200	18,200	21,100	17,000
Asia Pacific and Japan	16,200	20,400	13,300	20,800	19,300
<b>Nonhazardous waste landfill diversion rate***</b> [percentage of total produced]					
Global	88.4%	91.3%	88.8%	84.9%	82.2%
Americas	87.3%	90.9%	89.8%	82.0%	80.2%
Europe, Middle East, and Africa	90.6%	90.6%	85.3%	88.6%	89.0%
Asia Pacific and Japan	89.4%	93.0%	88.7%	89.5%	80.2%
<b>Nonhazardous waste composition, 2011</b> [percentage of total] (see <a href="#">Waste and recycling section</a> )					

HP operations (also see GHG emissions below)	2007	2008	2009	2010	2011
<b>Hazardous waste****</b> [tonnes]	8,830	10,500	7,300	8,430	7,400
Americas	2,360	3,380	2,470	3,600	3,030
Europe, Middle East, and Africa	1,590	2,080	2,210	2,570	2,560
Asia Pacific and Japan	4,880	5,020	2,620	2,260	1,810
<b>Water consumption*****</b> [million liters]	7,359	7,225	7,647	8,155	8,041
Americas	4,518	4,297	4,615	4,707	4,395
Europe, Middle East, and Africa	713	831	1,001	1,124	1,192
Asia Pacific and Japan	2,128	2,096	2,031	2,324	2,454
<b>Wastewater generation</b> [million liters]				1,225	1,296
Americas				562	587
Europe, Middle East, and Africa				264	259
Asia Pacific and Japan				399	450
<b>Ozone depletion potential of estimated emissions†</b> [kg of CFC-11 equivalent]	6,690	4,543	4,407	4,473	4,161
Americas	2,886	2,776	3,573	3,106	3,732
Europe, Middle East, and Africa	25	32	70	17	38
Asia Pacific and Japan	3,778	1,735	764	1,350	391

**Disposition by type of TRI material (see [Toxics release inventory on page 63](#))**

\* Some segments do not add up to total due to rounding.

\*\* Diesel is mostly used at HP for testing generators. HP does not measure the use of this energy.

\*\*\* We have restated our 2010 nonhazardous waste data (from 79,800 tonnes as reported in the HP 2010 Global Citizenship Report) to ensure greater consistency with the methodology that we use to calculate other environmental data, including nonhazardous waste in prior years. Some segments do not add up to total due to rounding.

\*\*\*\* 2009 and 2010 data for the Europe, Middle East, and Africa region, and the global totals for those years, were restated to correct reporting errors in the 2009 and 2010 Global Citizenship Reports. Some segments do not add up to total due to rounding.

\*\*\*\*\* 2010 water consumption data is revised to reflect updates to reported data. Some segments do not add up to total due to rounding.

† To estimate these emissions, HP uses EPA Climate Leaders Greenhouse Gas Inventory Protocol Core Module Guidance May 2008, in conjunction with global warming potential values from [www.ipcc.ch/publications\\_and\\_data/ar4/wg1/en/ch2s2-10-2.html](http://www.ipcc.ch/publications_and_data/ar4/wg1/en/ch2s2-10-2.html). Some segments do not add up to total due to rounding.

GHG emissions (Scopes 1-3, including from operations)†	2007	2008	2009	2010	2011
<b>GHG emissions from operations**</b> [tonnes CO <sub>2</sub> e]		2,165,500	2,060,300	1,865,100	1,856,500
Americas		1,327,400	1,241,500	1,179,900	1,162,700
Europe, Middle East, and Africa		338,800	356,600	253,800	208,500
Asia Pacific and Japan		499,300	462,200	431,400	485,300
<b>GHG emissions intensity***</b> [tonnes CO <sub>2</sub> e/\$ million USD of net revenue]		19.90	19.31	15.95	15.71

GHG emissions (Scopes 1-3, including from operations)*		2007	2008	2009	2010	2011
GHG emissions by scope [tonnes CO <sub>2</sub> e]						
Scope 1						
Region [tonnes CO <sub>2</sub> e]				290,300	281,400	275,700
Americas				170,500	161,900	162,600
Europe, Middle East, and Africa				93,700	100,100	96,200
Asia Pacific and Japan				26,100	19,400	16,900
Type						
Natural gas [tonnes CO <sub>2</sub> e]				80,700	88,000	78,700
Americas				53,800	53,900	47,000
Europe, Middle East, and Africa				25,600	32,400	29,200
Asia Pacific and Japan				1,300	1,700	2,500
Diesel/gas/oil [tonnes CO <sub>2</sub> e]				22,700	15,500	6,800
Americas				4,000	3,200	1,400
Europe, Middle East, and Africa				600	500	400
Asia Pacific and Japan				18,100	11,800	5,000
HP auto fleet**** [tonnes CO <sub>2</sub> e]		161,100	168,900	138,400	132,300	129,600
United States and Canada		87,200	81,900	73,900	67,800	64,000
Europe, Middle East, and Africa		71,400	85,000	63,700	63,700	61,700
Asia Pacific and Japan		2,500	2,000	800	800	3,900
HP air fleet [tonnes CO <sub>2</sub> e]		14,300	21,600	13,400	12,500	13,200
Americas		14,300	21,600	13,400	12,500	13,200
Europe, Middle East, and Africa		0	0	0	0	0
Asia Pacific and Japan		0	0	0	0	0
Refrigerants (HFCs) [tonnes CO <sub>2</sub> e]				32,000	29,700	39,200
Americas				22,300	21,100	28,800
Europe, Middle East, and Africa				3,800	3,500	4,900
Asia Pacific and Japan				5,900	5,100	5,500
PFCs***** [tonnes CO <sub>2</sub> e]		13,490	11,630	3,140	3,440	8,200
Americas		12,920	11,390	3,100	3,400	8,160
Europe, Middle East, and Africa		0	30	40	40	40
Asia Pacific and Japan		570	210	0	0	0

GHG emissions (Scopes 1-3, including from operations)*		2007	2008	2009	2010	2011
Scope 2						
Region [tonnes CO <sub>2</sub> e]				1,921,800	1,728,500	1,723,600
Americas				1,158,300	1,098,300	1,077,300
Europe, Middle East, and Africa				326,600	217,400	174,000
Asia Pacific and Japan				436,900	412,800	472,300
Type						
Purchased electricity for operations [tonnes CO <sub>2</sub> e]				2,030,800	1,946,100	1,999,300
Americas				1,219,900	1,160,600	1,155,400
Europe, Middle East, and Africa				374,000	372,700	371,600
Asia Pacific and Japan				436,900	412,800	472,300
Reductions from voluntary purchases of renewable energy and renewable energy credits [tonnes CO <sub>2</sub> e]				-78,700	-160,500	-231,300
Americas				-61,600	-62,300	-78,100
Europe, Middle East, and Africa				-17,100	-98,200	-153,200
Asia Pacific and Japan				0	0	0
Reductions from voluntary upgrades to other no/low carbon energy sources (such as large hydro) [tonnes CO <sub>2</sub> e]				-30,300	-57,100	-44,400
Americas				0	0	0
Europe, Middle East, and Africa				-30,300	-57,100	-44,400
Asia Pacific and Japan				0	0	0
Scope 3						
Product manufacturing (estimated) <sup>†</sup> [tonnes CO <sub>2</sub> e]		3,500,000	4,100,000	3,500,000	4,800,000	NA
Product transport (estimated) <sup>††</sup> [tonnes CO <sub>2</sub> e]		2,000,000	1,800,000	1,700,000	1,900,000	1,900,000
Employee commercial air travel <sup>†††</sup> [tonnes CO <sub>2</sub> e]		289,000	320,000	214,000	304,000	322,000
Product recycling (estimated emissions avoided) <sup>††††</sup> [tonnes CO <sub>2</sub> e]		210,000	300,000	210,000	225,000	250,000

\* Beginning in 2009, HP integrated its legacy and Electronic Data Systems (EDS) data into a single calculation methodology, enabling the reporting of several metrics below beginning that year.

\*\* Total includes Scope 1 and Scope 2 emissions in table, except emissions from HP auto fleet and HP air fleet.

\*\*\* Worldwide GHG emissions do not include employee travel. Historical emissions intensity values were calculated using HP's annual revenue as characterized in financial reporting and GHG emissions from facilities, the HP auto fleet, and the HP air fleet as reported for that year in the HP Global Citizenship Report (i.e., historical values were not adjusted for corporate acquisitions per the GHG Protocol). Our base-line emissions in 2005 without adjustments for corporate acquisitions (such as Enterprise Data Services in 2008) was 1,551,300 tonnes of CO<sub>2</sub>e. Though our intensity value increased due to the acquisition of Enterprise Data Services in 2008, we have implemented a variety of energy efficiency measures and made purchases of renewable energy that have subsequently decreased this number.

\*\*\*\* Includes calculated values for HP's Americas and Europe, Middle East, and Africa regions, and estimated values for the company's Asia Pacific and Japan region.

\*\*\*\*\* Use of updated industry standard emissions factors for process tools resulted in a considerable increase in estimated emissions in 2011. This data is based on the calendar year.

<sup>†</sup> Refers to first-tier suppliers for manufacturing, materials, and components. Emissions are estimated based on suppliers' dollar volume of HP business compared with their total revenue. The majority of these companies report on a calendar year basis. 2010 is the most recent year data is available.

<sup>††</sup> Does not include data from all recent HP acquisitions.

<sup>†††</sup> Values for 2007-2009 are based on emissions factors for short-haul, medium-haul, and long-haul flights and total miles flown in each category. 2010 and 2011 values were provided by HP's global travel agency using a more accurate methodology which accounts for the type of aircraft, passenger and cargo load, cabin class, and miles traveled for each ticketed trip. Data for 2010 was restated.

<sup>††††</sup> According to the U.S. Environmental Protection Agency's [Waste Reduction Model \(WARM\) Tool](#), CO<sub>2</sub>e reductions from recycling are calculated per the following formula: 1.858 kg CO<sub>2</sub>e/kg recovered electronic waste.

# Goals: environment

## Products and solutions

### Life cycle assessment

Year	Goal
2011	<p>Establish an International Organization for Standardization (ISO) technical committee working group for a commercial printing carbon footprint standard.</p> <p><b>Progress:</b> HP participated in the working group; the proposed standard will be up for a vote during 2012.</p>
	<p>Conduct life cycle assessments (LCAs) on numerous products across our imaging and printing portfolio.</p> <p><b>Progress:</b> HP completed 32 LCAs on HP LaserJet products as well as an LCA comparing a digital photo album with an album of printed photos.</p>
	<p>Conduct pilot studies and training of the Product Environment Metrics tool for HP large-format, commercial, and industrial printing solutions.</p> <p><b>Progress:</b> HP completed the training, but conducted no pilot studies due to changing project priorities.</p>
	<p>Communicate life cycle assessment carbon footprint methodology or Product Attribute to Impact Algorithm (PAIA) results for notebooks.</p> <p><b>Progress:</b> HP collaborated with the Massachusetts Institute of Technology (MIT) to create a draft PAIA tool for notebooks. We will release the PAIA tool once pertinent component data has been vetted, and anticipate publishing product carbon footprint values for new notebooks beginning in 2012.</p>
2012	<p>Calculate and disclose product carbon footprint values using the PAIA tool for new HP notebook, desktop, and monitor products.</p>
	<p>Complete life cycle assessments on 20 additional HP LaserJet printers, one HP scanner, and one book vs. e-reader.</p>
	<p>Work with competitors to establish product category rules for printers.</p>



## Materials

Year	Goal
2011	<p>As technologically feasible alternatives become readily available that will not compromise product performance or quality, and that will not adversely impact health or the environment, we will complete the phase out of BFR and PVC in newly introduced personal computing products in 2011.*</p> <p><b>Progress:</b> HP achieved 67% of its goal to phase out BFR and PVC in newly introduced personal computing products in 2011; 100% of all new notebook products have achieved this BFR- and PVC-free goal. HP will complete its goal to phase out BFR and PVC where technically feasible in those few remaining new PC products as market demand and customer expectations permit.</p> <hr/> <p>Use a total of 100 million pounds (45,000 tonnes), cumulatively from 2007, of recycled plastic in HP printing products.</p> <p><b>Progress:</b> Achieved as of July 2011.</p> <hr/> <p>Apply the European Union (EU) Restriction of Hazardous Substances (RoHS) 2 substance and exemption requirements voluntarily outside the EU (and European Free Trade Association) on a worldwide basis within 6 months of each of the EU's various legal compliance dates for virtually all HP-branded products in the scope of EU RoHS 2, except where it is widely recognized that there is no technically feasible alternative (as indicated by an exemption under the EU RoHS Directive).</p> <p><b>Progress:</b> Achieved for 2011.</p> <hr/>
2012	<p>Complete the phase-out of bis (2-ethylhexyl) phthalate (DEHP), dibutyl phthalate (DBP), and butyl benzyl phthalate (BBP) in newly introduced personal computing products by the end of 2012.</p>

\* Meeting the evolving definition of "BFR/PVC-free" as set forth in the "NEMI Position Statement on the Definition of 'Low-Halogen' Electronics (BFR/CFR/PVC-Free)." Plastic parts contain < 1,000 ppm (0.1%) of bromine [if the Br source is from BFRs] and < 1,000 ppm (0.1%) of chlorine [if the Cl source is from CFRs or PVC or PVC copolymers]. All printed circuit board (PCB) and substrate laminates contain bromine/chlorine total < 1,500 ppm (0.15%) with a maximum chlorine of 900 ppm (0.09%) and maximum bromine being 900 ppm (0.09%). Power supply and power cords are not BFR/PVC free. Service parts after purchase may not be BFR/PVC free. WWAN is not BFR/PVC free.

## Paper

Year	Goal
2011	<p>40% or more of HP-branded paper will be Forest Stewardship Council (FSC®)-certified or have at least 30% postconsumer waste content by the end of 2011.</p> <p><b>Progress:</b> We exceeded the 40% goal for HP-branded paper meeting one or both of these criteria, compared with 14% that met the criteria in 2010.</p> <hr/>
2015	<p>50% or more of HP-branded paper will be FSC-certified or have at least 30% postconsumer waste content by the end of 2015.</p> <p><b>Progress:</b> We are on track to meet this target (see related 2011 goal above).</p> <hr/>

## Manufacturing

Year	Goal
2011	<p>Report the aggregated greenhouse gas (GHG) emissions from HP's largest first- and second-tier suppliers, representing more than 90% of first-tier and 45% of second-tier material, components, and manufacturing spend, including all HP final assembly manufacturers.</p> <p><b>Progress:</b> Reported emissions representing 95% of HP's spending with first-tier suppliers for 2010 (the most recent data available). Suppliers representing 54% of HP's first-tier supplier spending estimated their own Scope 3 GHG emissions.</p> <hr/> <p>Report supplier greenhouse gas emissions performance in year-over-year comparison.</p> <p><b>Progress:</b> Reported 2010 performance.</p> <hr/> <p>Report on actual savings our suppliers achieved from the China Energy Efficiency Partnership program.</p> <p><b>Progress:</b> During the first 10 months of the 2011 program cycle (through June 2011), participating HP suppliers reported savings that total 6 million kilowatt hours.</p>
2012	<p>Continue to promote supplier transparency in environmental performance and carbon emissions reduction by collecting carbon emissions data from suppliers representing 95% of first-tier manufacturing, material, and component supplier spend.</p> <hr/> <p>Facilitate supplier environmental performance improvements by tripling the number of HP supplier sites participating in the Energy Efficiency Partnership program compared with 2011 and sharing energy-saving best practices developed through the program to date.</p>

## Packaging

Year	Goal
2011	<p><b>Inkjet supplies</b></p> <hr/> <p>Achieve 35% minimum recycled content for corrugate, globally.</p> <p><b>Progress:</b> Achieved.</p> <hr/> <p>Achieve 80% minimum recycled content for paperboard, globally.</p> <p><b>Progress:</b> Achieved.</p>
2011	<p><b>Desktop and notebook PC products</b></p> <hr/> <p>Achieve 35% minimum recycled content for corrugate, globally.</p> <p><b>Progress:</b> Achieved.</p> <hr/> <p>Reduce the ratio of total packaging weight to total packaged product weight to 28%.</p> <p><b>Progress:</b> We have taken steps to reduce the ratio and believe that we made substantial progress in 2011. However, due to several changes in HP packaging designs and the complex nature of the resulting calculations, we cannot accurately report our progress on the goal at this time. We are updating our tools to more reliably assess this weight ratio in the future.</p>

## Transport

Year	Goal
2013	<p>Implement network enhancements, mode changes, and route optimization that decrease greenhouse gas emissions from product transport by 180,000 tonnes of carbon dioxide equivalent (CO<sub>2</sub>e), since 2008.</p> <p><b>Progress:</b> Through 2011, we have achieved reductions through various projects of 138,000 tonnes of CO<sub>2</sub>e, since 2008.</p>

## Product use

Year	Goal
2011	<p>HP will reduce the energy consumption of HP products* and associated greenhouse gas) emissions to 40% below 2005 levels by the end of 2011.</p> <p><b>Progress:</b> Reduced to 50% below 2005 levels, achieved 9 months ahead of schedule.</p> <hr/> <p><b>Representative product categories have their own goals, including the following goals for HP's high-volume printer, and desktop and notebook PC families:</b></p> <hr/> <p>HP will improve the overall energy efficiency of HP ink and laser printing products by 40%, relative to 2005.**</p> <p><b>Progress:</b> HP exceeded this goal and improved the energy efficiency of HP ink and laser printing products by 46%, relative to 2005.</p> <hr/> <p>HP will save customers 1 billion kilowatt hours (kWh) of electricity through a variety of product design strategies in HP's high-volume HP desktop and notebook PC families, relative to 2008.***</p> <p><b>Progress:</b> HP exceeded this goal and saved customers 1.4 billion kWh through 2010.</p> <hr/>
2012	<p>Worldwide, new 2012 HP LaserJet and inkjet printers will use 13% less electricity annually than 2011 HP LaserJet and inkjet printers.****</p>

\* The average energy consumption of HP products is estimated using high-volume product lines representative of the overall shipped product volume. Energy consumption has been estimated in 2005 and annually since. The high-volume product lines include notebook and desktop computers, inkjet and LaserJet printers, and industry-standard servers.

\*\* Efficiency is defined in terms of kWh (using the typical electricity consumption method) divided by pages per minute. These families represent more than 32% of inkjet printers and more than 45% of LaserJet printers shipped in 2005. HP updated this goal from the goal included in the fiscal year 2007 Global Citizenship Report, which targeted a 30% improvement in energy efficiency by 2010, relative to 2005.

\*\*\* Energy savings calculated by comparing average 2008 HP product ENERGY STAR® typical energy consumption (TEC) value to average 2010 HP product ENERGY STAR TEC value multiplied over 2008 volume.

\*\*\*\* Baseline figure is model year 2011 HP LaserJet and inkjet printers sold worldwide.

## Product reuse and recycling

Year	Goal
2015	Recycle 3.5 billion pounds (1.6 million tonnes) of electronic products and supplies by the end of 2015 (since 1987).
	Reuse 40 million electronic product and accessory units by the end of 2015 (since 2003).

## HP operations

### Energy and GHG emissions

Year	Goal
2012	<p>Double voluntary purchases of renewable energy to 8% of electricity use (in addition to the renewable energy available by default in the power grid).</p> <p><b>Progress:</b> We purchased approximately 440 million kilowatt hours of renewable energy worldwide in 2011, equivalent to more than 10% of overall electricity use, achieving our goal 1 year early.</p>
2013	<p>Reduce the greenhouse gas (GHG) emissions from HP-owned and HP-leased facilities by 20% relative to 2005 levels by the end of 2013 on an absolute basis.</p> <p><b>Progress:</b> GHG emissions from our operations (not including travel) equaled 1,856,500 tonnes in 2011, 20% below our 2005 baseline, meeting our goal 2 years early. By the end of 2012, we will create a new goal for reduction of GHG emissions from operations.</p>
2015	Reduce greenhouse gas emissions from HP's U.S. auto fleet by 10% on a per unit basis, compared with 2010.

### Water

Year	Goal
2015	Reduce freshwater use at sites identified as water-stressed by 3%, compared with 2011 consumption at those locations.

# Society

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At HP, we apply our talent, technology, and partnerships to improve communities and address social challenges—such as education and health—around the world. In addition, we promote responsible practices in our supply chain, respect human rights, and foster ethical behavior. We strive to create a workplace where all of our employees can flourish.



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# Ethics and human rights

Technology is transforming the world, making it more important than ever for companies such as HP to make this transformation thoughtfully and responsibly. [Our values](#) guide us to behave ethically and with respect for others, including suppliers, partners, employees, customers, and society more broadly. We use our scale and influence to encourage similar behavior beyond our operations. Read more in [Human rights on page 85](#).

We work diligently to maintain a strong culture of integrity globally, regardless of cultural norms or local laws and regulations. Our [Standards of Business Conduct \(SBC\)](#) applies to all HP employees, everywhere. Our robust ethics and compliance program ensures we don't just avoid doing the wrong thing, but also that we enhance our brand by winning the right way. Our approach requires that all HP employees, partners, and suppliers, everywhere, behave with integrity and use lawful and ethical business practices. We do not tolerate bribery and will never trade our integrity for a business opportunity. This means refusing to pay bribes or kickbacks even when it means walking away from a deal (see [Anti-corruption](#) section).

We have processes in place for employees, partners, and suppliers to report ethics issues that do arise, and we work quickly to resolve those according to our policy and local laws. Read more in [Asking questions and reporting concerns on page 84](#).

## HP codes of conduct

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### Employees

[Standards of Business Conduct](#)  
(20+ languages)

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### HP U.S. Public Sector Employees

[U.S. Public Sector Code of Conduct](#)

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### Contingent Workers

[Contingent Worker Code of Conduct](#)  
(20+ languages)

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### Suppliers

[HP Electronic Industry Citizenship Coalition \(EICC\) Code of Conduct](#)

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### Partners

[Partner Code of Conduct](#)  
(20+ languages)



# Ethics and compliance

Every day, HP's actions impact our reputation. Legal compliance is the absolute minimum we expect of our employees, partners, and suppliers. We diligently promote a culture of integrity and ethical decision making everywhere we operate, even when it means holding ourselves to a higher standard than local laws or customs require. We have in place the standards, governance structures, training, communications, and reporting and investigation procedures needed to ensure ethical behavior and legal compliance globally.

Our [Standards of Business Conduct \(SBC\)](#) sets non-negotiable expectations for all our decisions and actions and provides guidance in difficult situations, such as avoiding conflicts of interest and rejecting bribery and corruption. The SBC is available in more than 20 languages and is supplemented by additional codes for HP employees working with the U.S. Public Sector, [contingent workers](#), [suppliers](#), and [partners](#).

## Governance structure and responsibilities

Our governance structure includes executives from the board level and down. They set the tone at the top and reinforce our ethics and compliance culture. Our Ethics and Compliance Office leads this work from within HP's Office of the General Counsel, with oversight from the [Board of Directors](#).

Meg Whitman became HP's president and chief executive officer in September 2011, and has served as a member of HP's board since January 2011. When Ms. Whitman was appointed, Raymond Lane moved from nonexecutive chairman to executive chairman of the board of directors. In connection with Mr. Lane's transition to an executive role, HP appointed Rajiv Gupta to serve as lead independent director.

The board's [Audit Committee](#) provides nonexecutive input into HP's ethics and compliance program and provides guidance to our chief ethics and compliance officer as required.

See also information on [HP board membership](#), [board committees and composition](#), and [corporate governance guidelines](#), which covers items including director independence and compensation.

### Ethics and compliance governance structure



### Key ethics and compliance functions

The diagram shows HP's organizational governance structure for ethics and compliance. Here are just two examples of significant activities carried out by these functions during the year:

- The Compliance Office continued to assess our compliance functions against predefined standards, identify new legal risks, and track progress against recommendations made during our "wellness assessment" process, which began in 2009. Every 2 years, we comprehensively assess compliance risks for each business group and will next do so in 2012. The Compliance Office is the central hub for 44 companywide compliance functions including the privacy, anti-corruption, and global trade offices.
- We increased the number of SBC liaisons from 28 to 36 to further embed ethics and compliance into each business unit. SBC liaisons are senior-level employees who champion ethics and compliance across HP.

## HP employees making an impact: Eberhard Koehler

Eberhard Koehler is working to level the playing field among HP's channel partners, helping to ensure that business is done fair and square. Learn more about [Eberhard Koehler on page 140](#).

## Communication and training

Every person at HP is accountable for their actions—regardless of the position held in the company. We continue to strengthen our training and awareness program to maintain focus on ethics and compliance. The main initiatives include:

- **Mandatory ethics and compliance annual refresher course** This 60-minute online session covers the SBC and key policies, procedures, and high-risk issues. Between March 1 and June 30, 2011, 99.2% of employees (excluding new hires, those on leave of absence, and people leaving HP) completed the course. New hires are asked to complete a more comprehensive course within 30 days of their start date.
- **Videos** Our Ethical Moments videos depict ethical issues that might arise and how to handle them. In 2011, approximately 35,000 employees viewed each of four videos on reporting fraud, accuracy of records, data protection, and gifts and entertainment. In our Leaders on Ethics videos, senior leaders provide guidance on company policies and workplace behavior. This year, the videos covered anti-corruption, social media, and information technology security.
- **lonETHICS** New this year, *lonETHICS* combines our previous employee *Ethics Bulletin* and *SBC Lessons Learned* for leaders into a twice yearly presentation of anonymous real-life case studies, “what if?” scenarios, timely tips, and statistics to help employees understand the questions to ask and actions to take if faced with similar situations.

### Spotlight on anti-corruption

HP's expansion in growth markets means we increasingly operate in countries where regulations and cultural norms may be less stringent than our own standards. Our responsibility is to make sure everyone lives up to the highest standards.

Corrupt behavior impedes legal compliance, and social and economic development, and undermines the very foundation upon which HP was built. We do not tolerate any bribery and will never trade our integrity for a business opportunity, and we do not offer bribes or kickbacks to win business or influence a business decision.

HP is committed to complying fully with all anti-corruption and anti-money laundering laws and regulations, including the U.S. Foreign Corrupt Practices Act and the UK Bribery Act. To ensure compliance with all applicable anti-corruption laws, wherever we do business, we have an extensive program, which is summarized in HP's [Anti-Corruption Compliance Program Overview](#). HP also has policies for [Global Business Gifts, Travel, and Entertainment](#) and [Political Contributions](#).

To minimize potential issues, we use globally respected data—the [Corruption Perceptions Index](#), produced by Transparency International—in conjunction with internal and other external data, to identify high-risk countries and raise awareness of ethical issues in each market.

Anti-corruption training is part of our mandatory ethics and compliance induction for new hires and an annual refresher course for all employees. Additionally, HP salespeople globally complete detailed, scenario-based anti-corruption training.

Those who work with public sector customers in the United States complete additional training specific to the unique requirements of doing business with the U.S. government. The ethics and compliance office provides specific guidance for growth markets, including face-to-face training on the SBC and Global Business Gifts, Travel, and Entertainment Policy in local languages.

In 2011, we launched a blueprint to standardize the way we implement our program in each new market, based on our experience in existing markets. We also appointed ethics and compliance directors in our Asia Pacific and Europe, Middle East, and Africa regions to strengthen our approach.

In addition, we require all employees, partners, and suppliers to report corrupt activity and to understand and follow our anti-corruption policies—ignorance is not an excuse for failing to comply. We encourage them to contact the Ethics and Compliance Office to check whether an action might constitute misconduct, and we promptly investigate alleged violations of our policies or the law.

The German Public Prosecutor's Office, the U.S. Department of Justice, and the Securities and Exchange Commission are investigating allegations of misconduct in connection with a 2003 transaction between a former HP subsidiary in Germany and the Russian General Prosecutor's Office (GPO). HP continues to cooperate fully with these authorities in their ongoing investigations of the GPO transaction. We take these matters very seriously, and HP remains committed to upholding the highest standards of ethics and compliance in the conduct of its business.

Additional activities in 2011 included:

- Delivering ethics and compliance training to country managers and senior leaders in high-risk countries. In 2011, we provided the training to 15 such countries. Other countries may participate at their discretion. The training is designed by the Ethics Office and delivered by regional and country attorneys in their native countries. It highlights current trends, and we encourage countries to customize the content where appropriate.
- Refreshing our ethics and compliance training for new employees to reflect current trends. The comprehensive, straightforward course explains the reporting channels available for discussing ethical concerns or reporting violations and HP's commitment to nonretaliation for employees reporting suspected violations in good faith.
- Training our global sales force in anti-corruption, with a particular focus on public sector sales. In 2012, we will deliver anti-corruption training to employees from Privacy, Social and Environmental Sustainability and Compliance, Global Security, and Government Relations, in addition to our salespeople.

## Asking questions and reporting concerns

HP encourages employees to speak up, ask questions whenever they are uncertain of the best course of action, and report anything that doesn't seem right—without fear of retaliation.

In keeping with HP's longstanding "open door" approach to communication, we provide guidance on asking questions and reporting concerns in our SBC, accompanying training module, corporate policy directory, and ethics and compliance website. Employees can talk to their line manager or more senior managers if ethics issues arise, or seek advice from our ethics and compliance experts or regional or business SBC liaisons.

### Investigation process overview

We work to provide more counseling on ethical issues to prevent violations of law, company policy, or the SBC. In 2011, we increased ethics and compliance consulting matters by 34.8%, compared with 2010. Views of the questions and concerns page of HP's global website increased by almost 90% between 2010 and 2011 as a result of our focus on encouraging people to seek guidance when they are unsure of the best course of action.

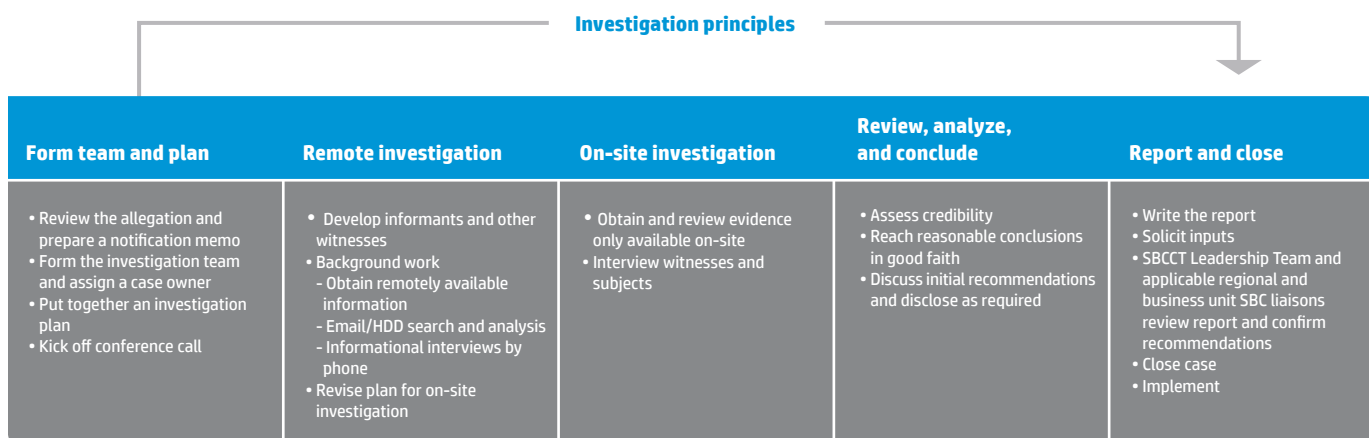
When alleged violations do occur, we provide formal, confidential communication reporting channels for employees and third parties including, beginning in 2011, an online form, as well as a global 24-hour toll-free hotline with translators available. Where allowed by law, reporting can be anonymous.

See how to [ask a question or report a concern](#).

## Investigating concerns

HP's Global Case Management System records allegations of ethical violations in a worldwide database, and provides management with access to incident details as needed, while protecting personal information. Data recorded in the system enables us to identify locations where higher levels of ethics and compliance-related incidents are being reported, indicating where additional action may be needed.

We respond promptly to all alleged violations and conduct investigations as appropriate. Investigations may involve local, regional, or corporate-level employees, depending on the allegation, and may include members of other relevant functions, as needed. The Litigation Investigations team oversees all escalated, corporate-led investigations. Details and results of investigations are kept confidential to the extent reasonably practical. We take appropriate disciplinary action based on the results of our investigations, including terminating employees and reviewing relationships with partners where necessary.



## Items reported to the Global SBC team or other compliance functions, 2007–2011

	2007*	2008	2009	2010	2011
Human resources	37%	56%	35%	44%	42%
Misuse of assets	20%	19%	14%	11%	10%
Fraud	12%	5%	12%	10%	9%
Sales channel violations	9%	1%	3%	3%	3%
Conflicts of interest	7%	4%	7%	6%	8%
Confidentiality	4%	4%	6%	5%	6%
Customer relationships	1%	0%	2%	2%	3%
Financial and public reporting	1%	1%	4%	3%	2%
Competition	0%	1%	1%	1%	3%
Other	9%	9%	16%	15%	14%

\* This data is for the calendar year. Data for 2008–2011 is for HP's financial year ending October 31, 2011.

# Human rights

Human rights are the fundamental rights, freedoms, and standards of treatment to which all people are entitled. HP upholds and respects human rights as reflected in the United Nations (UN) Universal Declaration of Human Rights (UDHR), the UN Global Compact, and the UN Guiding Principles on Business and Human Rights.

Respecting human rights is a core value at HP and is embedded in everything we do. We believe it is our corporate responsibility to use our size and influence to promote human rights in our communities. We apply this commitment across our business, from our

suppliers to our own operations to protecting the privacy of our customers. Our formal commitments are outlined in HP's [Global Human Rights Policy](#).

During 2011 we reviewed and enhanced our Global Human Rights Policy and strengthened HP's internal governance for managing human rights issues and fulfilling our human rights commitments.

We continue to participate in leadership initiatives and engage with organizations that promote global respect for human rights such as the Global Business Initiative on Human Rights (GBI) and BSR.

## HP employees making an impact: Zoe McMahon

As part of her work as director of HP's Social and Environmental Sustainability and Compliance program, Zoe McMahon collaborates with human rights organizations and draws on HP's experience to help improve working conditions in supply chains worldwide. Learn more about [Zoe McMahon on page 142](#).

## Faris Natour Director, Human Rights, BSR

Faris looks to HP to be at the forefront of businesses developing innovative approaches to addressing human rights. Visit [our online gallery](#) of external stakeholder perspectives to see Faris's video.



## Features of HP's enhanced Global Human Rights Policy

Following a risk assessment of HP's human rights policies and practices conducted by the Danish Institute on Human Rights (DIHR) in 2010 and commissioned by HP, our Global Citizenship Council (GCC) determined that the company's longstanding human rights policy should be revised to provide greater focus on the areas identified as priorities for our industry.

The policy, expanded in 2011, establishes HP's commitment to leadership in integrating respect for human rights worldwide into our operations and across our business. HP will in practice:

- Comply with laws and regulations where HP does business and adopt and apply international standards where laws are less stringent.
- Complete due diligence to avoid complicity in human rights violations.
- Regularly assess human rights risks, policies, and impacts and provide visibility of the results to senior executives.
- Provide access to independent grievance mechanisms immediately to raise concerns or identify adverse human rights impacts.
- Promptly investigate allegations and pursue action to mitigate any adverse human rights impacts.
- Promote continual improvement through capability building for our business partners, terminating relationships only as a last resort.
- Advance our human rights practices through a journey of cumulative progress.
- Report transparently on our efforts.

The policy highlights the cross linkage between human rights and other existing HP policy areas such as supply chain management, employment practices, and privacy. It summarizes human rights components of existing policies that affirm HP's commitment to human rights across business functions.

## Human rights governance and management

Because respect for human rights takes many forms and can occur in multiple areas of HP's business, we need strong governance to ensure consistent risk identification and issues management. During 2011, we added a human rights program manager and transferred responsibility for human rights program management to the Ethics and Compliance Office within the Office of the General Counsel.

HP's GCC, sponsored by a member of the HP Executive Council, is made up of senior executives and subject matter experts from across the company. The council meets quarterly to promote global citizenship and human rights. During 2011, the membership of the GCC was modified to ensure appropriate senior leader and subject matter expert representation. The GCC was instrumental in the human rights policy review and approval of the enhanced policy.

Related to this process, we discussed seven focal areas identified by the DIHR with external stakeholders:

- Labor and employment, especially in our supply chain
- Conflict minerals
- Privacy and data protection
- Diversity and discrimination
- Freedom of expression
- Water
- Customer use of products and services

Feedback indicated that water issues were likely to increase in significance and that we should add an eighth focus area, anti-corruption, to our watch list.

## External leadership

HP continued its external advocacy and leadership to promote human rights during 2011, primarily through participation in the GBI. Supported by 14 companies, the GBI is pursuing two complementary workstreams: "action learning around the UN Guiding Principles on Human Rights" and "business awareness and capacity building."

During 2011, HP representatives spoke at the GBI Roundtable in Malaysia, contributing insights on incorporating respect for human rights through corporate policies and processes. HP is also involved in a project to provide guidance on how human rights principles can most effectively be embedded in contractual relationships.

## Other sections of the HP Global Citizenship Report relevant to human rights

Human rights issues intersect many aspects of HP's global citizenship work. Below are links to other sections of this report containing aspects of human rights management:

- [Anti-corruption](#)
- [Reporting and investigating human rights and other ethics concerns](#)
- Conflict minerals tracing and elimination (see below)
- [Health, education, and community initiatives](#) in support of human rights
- [Labor, employment, diversity, and antidiscrimination](#) in HP's operations
- [Privacy and data protection](#)
- [Supply chain human rights issues](#)
- [Water availability](#)

## Human rights–related policies

HP policies with particular relevance to human rights include:

- [HP Standards of Business Conduct](#)
- [HP Global Human Rights Policy](#)
- [Contingent Worker Code of Conduct](#)
- HP Best Work Environment Policy
- [HP Environmental, Health, and Safety \(EHS\) Policy](#)
- [HP Global Citizenship Policy](#)
- [HP Global Master Privacy Policy](#)
- [HP Harassment-free Work Environment Policy](#)
- [HP Nondiscrimination Policy](#)
- [HP Open Door Policy](#)
- [HP Electronic Industry Citizenship Coalition \(EICC\) Code of Conduct](#) (supplier code of conduct)
- [HP Supply Chain Social and Environmental Responsibility Policy](#)
- [Partner Code of Conduct](#)

# Conflict minerals

HP plays a leading role in international efforts focused on achieving practical solutions to the issue of conflict minerals in the Democratic Republic of Congo (DRC).

Minerals originating from the DRC have been a concern for more than a decade because some mines are controlled by armed militia engaged in a civil war. Transport over long distances from the mine is also vulnerable to interference by these forces. The problems in the DRC are complex and intractable, but HP has determined that its leadership and resources, working in collaboration with others, can develop pilot supply chains through which minerals can be mined free from the influence of armed groups.

One of our prime concerns is to avoid a widespread exit of trade from the region. This would worsen the plight of the population, and may not reduce trade in conflict minerals by those industries and companies not obligated to make disclosures under U.S. law. We believe that advancing multi-stakeholder initiatives will encourage others to join us in building a lasting solution. We have engaged widely, working in partnership with others committed to achieving conflict-free trade with the DRC, including industry peers and trade organizations, nongovernmental organizations (NGOs), and governments.



Mining tantalite at Luba Mine in Katanga, DRC.



## Progress toward a solution

In 2011 HP and its partners made significant progress on the following five fronts: (1) conducting due diligence of HP's supply chain, (2) supporting the development of an industry due diligence approach, (3) advancing the Electronic Industry Citizenship Coalition Global e-Sustainability Initiative (GeSI) Conflict-Free Smelter (CFS) program, (4) supporting an alliance for in-region mineral certification, and (5) influencing policy and legislation.

### Conducting due diligence of our supply chain

HP worked to conduct due diligence on its suppliers in advance of the final U. S. Securities and Exchange Commission (SEC) regulations implementing the conflict minerals provisions of the Dodd-Frank Act. We then followed up in August 2011 with a formal communication requiring suppliers to provide information about the smelters they use, and requesting that they adopt a DRC conflict-free policy and set the same requirements for their suppliers. HP's suppliers have provided the names of several hundred possible smelters and refiners. We are working with those companies to confirm which are smelters and will encourage those not already involved in CFS to participate in the program.

### Supporting the development of an industry due diligence approach

HP has developed and propagated to the industry a common approach to conducting due diligence. We were a codeveloper of the [EICC-GeSI reporting template](#) used to share due diligence information between suppliers and customers. We also cofacilitated the implementation of the dashboard tool that supports this reporting template, facilitating and standardizing data collection and reporting.

In addition, HP helped to teach hundreds of industry members how to use the template and dashboard to advance this standardized approach, leading to improved accuracy of information and less administrative duplication.

### Advancing the CFS program

HP is one of five company representatives on the Audit Review Committee of the CFS program. The committee's role is to identify and validate smelters that process only conflict-free minerals. CFS auditors have visited and reviewed more than 40 smelters to conduct audits according to CFS-developed protocols for tantalum, tin, tungsten, and gold—audit protocols shared with all industry sectors. To date, 11 tantalum smelters have been validated as conflict free through this process. The participation of 22 gold, 5 tungsten, and 45 tin smelters is under way.<sup>1</sup>

The list of conflict-free smelters is maintained at [www.conflictreesmelter.org](http://www.conflictreesmelter.org).



Miners using a sluicing technique to concentrate tantalite ore at the Mai Baridi Mine in Katanga.

### Supporting an alliance for in-region mineral certification

Establishing a validated supply of minerals to smelters poses significant challenges. Given that there is no visible difference between minerals from different mines, there is a need for secure traceability from mine to smelter to avoid misrepresentation of conflict minerals as conflict free. In addition, militias often engage in extortion of workers during mineral transport rather than at the mine itself, further confusing the clear origin of minerals. To be certified as conflict free, all transactions reflecting movement of minerals from mines to smelters need to be transparent. The Public-Private Alliance for Responsible Minerals Trade was founded to help establish a system of traceability in supply chains where there is a risk of involvement with conflict. The Solutions for Hope project is a leading example of how conflict-free tantalum is being sourced in the DRC today (see details on next page).

<sup>1</sup> As of March 15, 2012.

## Public-Private Alliance for Responsible Minerals Trade (PPA)

The rationale underpinning the newly established [Public-Private Alliance for Responsible Minerals Trade](#) is that collaboration between influential stakeholders is the key to achieving change with respect to sourcing conflict-free minerals. PPA is a joint initiative between the U.S. government, private sector companies, trade associations representing a range of industries, NGOs, and the International Conference on the Great Lakes Region (ICGLR). This alliance will act as a hub to support developing secure supply chains for conflict-free minerals. Notably, HP was the first corporation to commit to joining the PPA, and an HP representative was elected to its Governance Committee.

The PPA will focus on three functions:

- Growing existing programs and systems for businesses to source minerals from mines that have been audited and certified as conflict free
- Providing a platform for coordination and dialogue among government, industry, and civil society participants seeking to support conflict-free mineral sourcing in the DRC and Great Lakes Region
- Supporting a website that provides companies and other stakeholders with information about sourcing minerals in the DRC while remaining compliant with U.S. law

HP was one of two companies with representatives who traveled to the DRC to meet with stakeholders, visit mines, and assess the situation on the ground to inform HP's PPA governance role. During this trip, HP representatives participated in a series of separate meetings with other PPA members and the Provincial Minister of Mines of Katanga, Maniema, North Kivu, and South Kivu, as well as the local



HP's program manager Jay Celorie inspecting the tantalite crushing and homogenization processing at Kalemie Warehouse in Katanga, DRC.

civil society in Katanga, North Kivu, and South Kivu. In addition, HP representatives visited tantalite and cassiterite mines in Katanga, wolfram and cassiterite mines in Rwanda, and gold and cassiterite mines in South Kivu. Finally, HP and other PPA representatives met with the United Nations Organization Stabilization Mission in the DR Congo (MONUSCO) Head of Operations in Bukavu to understand the current situation with armed militias in the Kivu provinces.

## Solutions for Hope project

In 2011, HP announced its participation in Solutions for Hope, a project led by major capacitor manufacturer, AVX Corporation. One of the prime uses of tantalum is in the manufacture of electrical capacitors. Solutions for Hope has achieved the first validated source of conflict-free tantalum ore from the DRC through a "closed pipe" supply chain stretching from a mine free from conflict interference to a validated smelter.

The first delivery of conflict-free tantalum took place in November 2011. After processing by a validated conflict-free smelter, it will be used to manufacture the first DRC conflict-free tantalum capacitors. HP commends AVX for its leadership on this issue and intends to incorporate AVX's conflict-free tantalum capacitors in HP products when the capacitors become available. We believe it is appropriate to use our purchasing power as a market incentive for expansion of similar initiatives.

HP visited the mines, and the processing, warehousing, and smelting locations of the "closed pipe" Solutions for Hope project and observed how each of the below-listed parties has an important role to play in a responsible mineral supply chain:

- Mining co-op that coordinates the miners and provides equipment and training
- Mining company that owns title to the mining concession, purchases the minerals from the miners, supports the traceability of the transactions, and enables the concentrating and export of the minerals in a legal and transparent nature
- International Tin Supply Chain Initiative (iTSCI) employees who provide the independent tracking of the minerals produced
- Agents who work on behalf of the DRC government issuing iTSCI tags and verifying the iTSCI-reported totals
- Division of Mines that supports exporting minerals out of the DRC
- AVX, the corporation that has committed to purchase the tantalite at agreed prices

The on-the-ground review of this project revealed how a successful and responsible mineral supply chain can be created in the DRC.

## Influencing policy and legislation

HP supported the inclusion of the conflict minerals clauses in the [Dodd-Frank Act](#), which require disclosure of the use of tungsten, tantalum, tin, and gold originating in the DRC. We believe these provisions will facilitate greater transparency in supply chains and reduce the trade in minerals that fund armed conflict in the DRC. However well-intentioned the regulation, implementation has challenging

implications. For example, to comply, many companies are likely to eliminate trade from the DRC sources altogether, damaging that country's economy and worsening conditions for its people.

HP is seeking to reduce the adverse economic impact of the Dodd-Frank Act on the people of the DRC. We are advocating for implementation mechanisms that should encourage continued trade with the DRC.

During 2011, HP played a leading role in developing consensus comments and recommendations from a multi-stakeholder group of NGOs and socially responsible investors on this issue. These comments and recommendations were submitted to, and discussed with, the SEC.

HP also supports the [Organisation for Economic Co-operation and Development's](#) (OECD) due-diligence guidance on conflict minerals. HP is participating in a 1-year pilot program to test implementation

of the OECD's guidance and will provide feedback to the OECD through a series of three questionnaires and in-person multi-stakeholder meetings.

## Next steps

During 2012 we will continue progressing toward conflict-free minerals by tracing the smelters in our supply chain and publishing relevant details. We will encourage those smelters to participate in the CFS by giving preference to sourcing from smelters validated as conflict free.

We will continue our support for the CFS program and also for efforts to establish validated in-region conflict-free sourcing through the PPA and Solutions for Hope project.



HP is one of the world's largest technology companies and has one of the industry's most extensive supply chains. Comprising more than 1,000 production suppliers<sup>1</sup> and tens of thousands of nonproduction suppliers, it spans 6 continents, more than 45 countries and territories, and many cultures.

Our supply chain's breadth and depth is a foundation of HP's success, but it also brings challenges. We embrace our opportunity and responsibility to use our scale, purchasing power, and experience to help our suppliers improve their social and environmental responsibility (SER) standards and performance. Through these efforts, we work to help improve the lives of hundreds of thousands of people worldwide who make products for the information technology (IT) industry and support our operations.

HP has a long history of working with suppliers to improve their SER performance, as well as improving overall processes and standards in the industry. Since we launched our supply chain SER program in 2000, it has been a core part of our global citizenship efforts. During that time, we have been a leader in the industry on many fronts (see below).

## HP supply chain SER firsts

- First IT company to develop and implement a supplier SER code (2002)
- One of the first IT manufacturers to perform on-site supplier SER audits (2004)
- Founding member of the Electronic Industry Citizenship Coalition (EICC) (2004)
- First electronics company to publish a list of our suppliers (2007)
- First major IT company to publish its aggregated supply chain greenhouse gas (GHG) emissions (2008)

## Highlights

**1,000+**

Production suppliers, some with multiple sites

**250,000+**

Workers at sites audited in 2011 that produce HP products

**52+** million

Number of printers shipped by HP in 2011

**62+** million

Number of PC units shipped by HP in 2011

<sup>1</sup> HP uses the term "direct suppliers" in other sections of this report to include both "production suppliers" that provide materials for HP products and "nonproduction suppliers" that provide services related to HP products.



Our program focuses on production and nonproduction suppliers. We address the full range of SER issues, and also focus targeted programs on issues such as working hours, women's health, and [conflict minerals](#). We complement extensive and rigorous auditing with innovative and collaborative capability building initiatives. We also collaborate with suppliers at the end of the product life cycle, through our global network of vendors in 67 countries and territories that [collect, process for resale, and/or recycle returned products](#). Our hardware recycling and reuse standards cover the storage, handling, and [processing of returned electronic equipment](#).

In 2011, our key achievements included:

- Launched our [audit program](#) for [nonproduction suppliers](#)
- Demonstrated improvements in suppliers' audit performance following participation in our [capability building programs](#)
- Further expanded our supply chain SER audit program to Australia and Turkey
- Reached 760 supplier audits since the start of our program

## HP employees making an impact: Ernest Wong

Ernest Wong helps HP's suppliers improve their social and environmental performance. His work includes training supplier managers and employees on workers' rights, antidiscrimination, and energy efficiency. [Learn more about Ernest Wong on page 146.](#)

## Moving forward

We are proud of our progress to date, but our work is ongoing. This is due to the changing nature of the supplier landscape, shaped by economic and geopolitical forces, the ongoing globalization of technology manufacturing, the consolidation of existing firms, the emergence of new markets, as well as increasing external stakeholder awareness and engagement.

We continually seek innovative ways to approach SER issues and to extend the impact of our efforts. Our history and experience provide us the perspective, data, and relationships to thoughtfully evaluate and refine our program over time.

While established methods of addressing supply chain issues such as auditing and capability building will remain central to our approach, we intend to continue to innovate beyond traditional programs to effect lasting change. For example, we plan to extend our engagement with multi-stakeholder organizations, including [Social Accountability International](#) (SAI) and the [Dutch Sustainable Trade Initiative](#) (IDH), to provide independent assessments and targeted capability building as a way to improve supplier management systems and worker-manager dialogue. (See [Addressing Key Issues](#) for more information.) In addition, we continue to expect suppliers to provide increasing levels of transparency.

As we gain experience, we strive to make our program even more effective in pursuit of our values: to protect workers' rights and dignity, to ensure strong health and safety standards, to reduce environmental impacts, and to uphold the highest standards of business ethics.

## HP supply chain SER milestones

Year	Description	Region	Type of event
1992	<b>HP's first supplier questionnaire distributed</b> HP surveyed its global suppliers for the elimination of ozone-depleting substances.	Global	HP
1993	<b>Procuring Environmentally Responsible Materials (PERM) program implemented</b> PERM preceded HP's supply chain SER program and included HP's first supplier environmental requirements.	Global	HP
1998	<b>HP's environmental procurement policy and General Specification for the Environment (GSE) released</b> We communicate materials restrictions to our design teams and to our manufacturing suppliers through our <a href="#">GSE</a> .	Global	HP
2000	<b>Supply chain SER program launched</b> We launched our supply chain SER program with a long-term vision to help improve supplier labor management standards, human rights, and environmental performance.	Global	HP

Year	Description	Region	Type of event
2001	<b>Monitoring sources of tantalum from capacitor suppliers began</b> HP obtained letters from capacitor suppliers stating that they were not using tantalum sourced from the DRC.	Africa	HP
2002	<b>HP's first Global Citizenship Report published</b> HP's first Global Citizenship Report outlined our commitment to improving social and environmental performance over the next decade.	Global	HP
2002	<b>HP Supplier Code of Conduct rolled out</b> HP was the first electronics company to publish an SER Supplier Code of Conduct.	Global	HP
2003	<b>HP's supplier self-assessments began</b> Suppliers began self-assessments against our Supplier Code of Conduct requirements. Our target was to assess our top 40 suppliers by the end of the 2003 fiscal year. We achieved that goal.	Global	HP
2004	<b>EICC formed</b> The EICC fosters responsible management and operational practices in labor, human rights, ethics, the environment, and health and safety across the electronics industry's global supply chain. (See <a href="#">Collaboration on page 108</a> .)  HP was one of the founding members of the EICC and codeveloped the Electronic Industry Code of Conduct. HP has supplemented the EICC Code with additional requirements specific to freedom of association. See <a href="#">HP's EICC Code of Conduct</a> .	Global	Cross-industry
2004	<b>HP's first supplier audit performed</b> We completed 45 pilot audits in 2004, against a public goal to complete 30 during the year.	China, Mexico, Southeast Asia, and Eastern Europe	HP
2005	<b>HP's first supplier SER forum held in China</b> HP held the first SER forum for regional Chinese suppliers to review and discuss HP's SER and Restriction of Hazardous Substances requirements. Around 330 representatives from various suppliers participated.	China	HP
2006	<b>Capability building program launched</b> HP's capability building program commenced with the Focused Improvement Supplier Initiative, a program that provided 30 HP suppliers with the tools and resources to improve SER management within their facilities. Since then, our initiatives have covered multiple issues, including worker health, communication, environment, and antidiscrimination. (See <a href="#">Capability building on page 110</a> .)	Global	HP
2007	<b>Health and safety capability building efforts launched</b> HP joined the HERproject to raise awareness of the general and reproductive health needs of women working in manufacturing. (See <a href="#">Capability building on page 110</a> .)	Mexico	Multi-stakeholder
2007	<b>Kicked off capability building efforts focused on raising SER awareness through direct training of supplier workers</b> HP piloted a training program to directly train supplier employees in worker-management communications. The program helped workers better understand their labor rights and provided an independent workers' grievance hotline for communicating concerns about their working environment.	China	Multi-stakeholder



Year	Description	Region	Type of event
2008	<b>Comprehensive list of HP suppliers disclosed</b> We were the first electronics company to publish a list of our suppliers in our <a href="#">FY07 Global Citizenship Report</a> .	Global	HP
2008	<b>Suppliers' GHG emissions reported</b> HP became the first major IT company to publish its aggregated supply chain GHG emissions, representing 86% of our first-tier suppliers by spend. We increased that percentage to 95% for calendar year 2010.	Global	HP
2009	<b>Working hours key performance indicators (KPIs) program launched</b> HP piloted supplier use of KPIs to help reduce excessive working hours in the supply chain. (See <a href="#">Working hours KPIs</a> .)	China	HP
2009	<b>Conflict minerals program launched</b> HP's <a href="#">conflict minerals</a> program was launched, broadening the scope of our work to focus on tantalum, tin, tungsten, and gold mined in the Democratic Republic of Congo.	Africa	HP
2009	<b>First capability building program to reach multiple tiers of HP's supply chain</b> HP's year-long program with hard disk drive suppliers in Thailand was the company's first effort to reach multiple tiers of our supply chain. The program raised awareness of HP's EICC Code, facilitated best practice sharing among supplier management, and supported their implementation of SER-related management systems.	Thailand	Multi-stakeholder
2009	<b>Supply chain SER program expanded to nonproduction suppliers</b> Originally focused only on production suppliers, HP's supply chain SER program expanded to also include nonproduction suppliers. (See <a href="#">Our approach on page 96</a> .)	Global	HP
2010	<b>First joint Validated Audit Process (VAP) audits performed</b> The VAP is designed to eliminate duplication and "audit fatigue" by providing a common auditing approach for companies in the electronics industry. This allows for audit results to be shared by multiple customers of one supplier. (See <a href="#">Audit strategy</a> .)	Global	Cross-industry
2010	<b>Environmental sustainability capability building efforts kicked off</b> HP became the only information and communication technology company to join Energy Efficiency Partnership (EEP), a year-long pilot program designed to help major suppliers in China reduce energy use, GHG emissions, and costs. Through the EEP, HP expanded supplier capability building efforts to environmental improvement.	China	Multi-stakeholder
2011	<b>First HP nonproduction supplier audit performed</b> HP performed our first audits of nonproduction suppliers, auditing three facilities in China, India, and Mexico. (See <a href="#">Summary audit results on page 99</a> .) In 2011, HP surpassed 750 cumulative audits since our first audits in 2004.	China, Asia Pacific, North America	HP

## International Labour Organization (ILO) Declaration on Fundamental Principles and Rights at Work

HP's supply chain SER program promotes the core labor standards as stated in the ILO Declaration on Fundamental Principles and Rights at Work (1998):

- Freedom of association and the effective recognition of the right to collective bargaining. [Learn more.](#)
- Elimination of all forms of forced or compulsory labor. [Learn more.](#)
- Effective abolition of child labor. [Learn more.](#)
- Elimination of discrimination in respect of employment and occupation. [Learn more in Capability building on page 110.](#)

## HP's EICC Code of Conduct and General Specification for the Environment

Throughout this section, we refer to HP's EICC Code of Conduct, rather than simply the EICC Code of Conduct, the standard applied across the industry's global supply chain. In 2004, we co-led the development of the EICC Code. HP endorses the EICC Code in its entirety, but we have supplemented it with additional requirements specific to [freedom of association \(standard A7\)](#).

We support the rights of workers at our supplier facilities to associate freely on a voluntary basis, seek representation, join or be represented by works councils, and join or not join labor unions and bargain collectively as they choose as established by local law.

We require all suppliers to conform to HP's EICC Code, and comply with our [General Specification for the Environment](#), which includes substance and materials requirements for parts and components that are used in HP products, packaging, and manufacturing processes. (See [Materials on page 36](#) for more information.)

## Long-term SER relationship

### Lite-ON case study

Lite-ON, a Taiwan-based manufacturer employing 35,000 people and with 45 factories globally, has supplied HP with various products and parts for more than 10 years. The company has been a long-time participant in HP's SER program. HP first audited Lite-ON in early fiscal year 2004, one of the first supplier audits performed in the electronics manufacturing industry. At that time, Lite-ON demonstrated awareness and knowledge of HP's SER expectations, but lacked various documented SER policies and procedures.

Working closely with HP, the company has pursued SER performance improvements ever since. It has regularly taken part in HP's capability building programs, such as Chinese Worker Rights Training, the Energy Efficiency Partnership program, Hepatitis B awareness training, the HERproject, and predeparture training (see [Capability building on page 110](#) for more information). In 2012, Lite-ON will participate in the Dutch Sustainable Trade Initiative's effort to improve labor conditions at electronics factories in the Pearl River Delta region of China (see [Collaboration on page 108](#)).

Lite-ON has also capitalized on learning opportunities provided by our collaborative audit process, and the company's progress is encouraging. On average, the number of major nonconformances discovered in full re-audits at the company's sites decreased 35% compared with initial audits at the same sites. Moreover, initial audits at Lite-ON sites in 2011 identified nearly 45% fewer major nonconformances than initial audits at the company's sites. HP awarded Lite-ON the Supply Chain SER Performance Improvement Award at our 2011 Supplier Summit in San Diego, California, United States, recognizing its involvement in our capability building programs and its conformance with HP's EICC Code.

The company has also increased transparency significantly during the last several years, and has published a corporate social responsibility report annually since 2008 (HP encourages suppliers to do so). The most recent version achieved Application Level A+ of the Global Reporting Initiative (GRI) G3 Sustainability Reporting Guidelines.

Lite-ON, among a number of other suppliers, exemplifies the effectiveness of long-term participation in HP's supply chain SER program.

# Our approach

Through HP's supply chain social and environmental responsibility (SER) program, we work with our high-risk supplier sites, as well as other stakeholders, to improve labor standards, human rights, and environmental performance. The collaboration includes:

- **Risk assessments** These help us prioritize the extent to which we engage with suppliers through our supply chain SER program. Suppliers also complete a self-assessment questionnaire to help us identify SER performance risks.
- **Capability building** Through programs and partnerships with nongovernmental organizations (NGOs), training partners, governmental organizations, and suppliers, we help supplier management and workers improve SER performance.
- **Measuring performance** Our [audit program](#) and input from third parties (see [Collaboration on page 108](#)) identify issues and help us target areas of concern to improve supplier SER performance.
- **Stakeholder engagement** HP engages with stakeholders to understand and respond to issues of concern regarding supply chain SER.

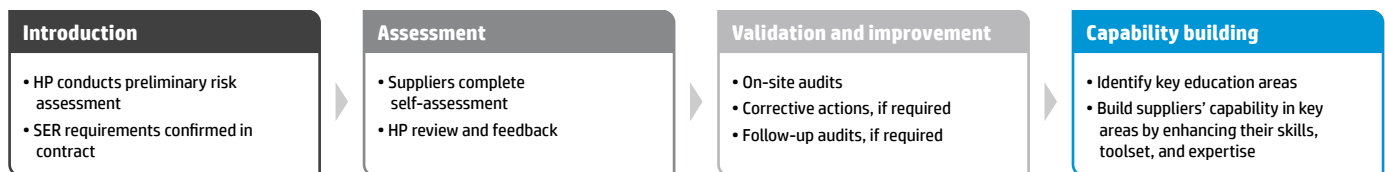
Concerns with respect to emerging issues in the information technology (IT) industry, such as [conflict minerals](#) and [migrant labor](#), have highlighted the need to increase work with lower-tier suppliers to improve SER performance. [Collaboration](#) across the IT industry, and with other industries, helps us achieve this objective.

## Supplier management system

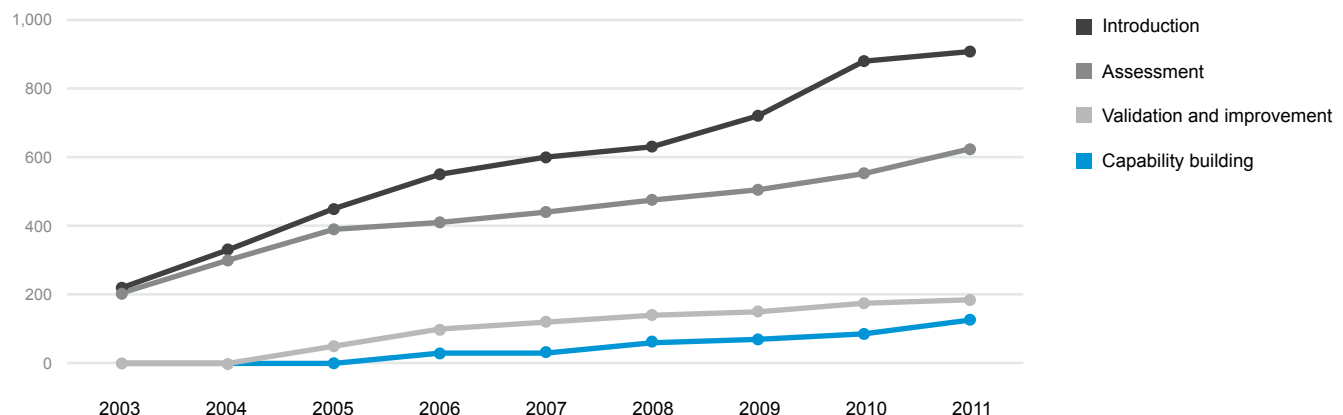
HP's four-phase supplier management system (see graphic below) provides an overarching framework for suppliers to progress through our supply chain SER program. We focus our resources according to risks posed by supplier activities. The system aims to improve long-term SER performance by building suppliers' capabilities. Since our SER program began, all of our key production suppliers have completed the introduction and assessment stages.

The gap between introduction and assessment represents supplier sites that pose low risk. The gap between assessment and validation represents sites whose self-assessments indicate they are low risk. The increases in introduction and assessment starting in 2009 and 2010 are largely due to the expansion of our program to nonproduction suppliers. The following pages explain each step in the four-phase supplier management system.

### Four-phase supplier management system



### Number of suppliers reaching each phase, cumulative



## Phase 1: Introduction

HP considers supplier risk profiles and conducts a formal risk assessment if necessary. We then confirm SER requirements in our contract.

We assess the following risk factors:

- **Location Risk** is higher in some locations than others.
- **Procurement category** Risk is higher in some procurement categories, such as manufactured parts, components, and real estate construction services, and lower in others, such as software licensing, marketing services, and telecom services.
- **Company information** Insight from previous audits, press articles, incidents, or accidents may affect our assessment of supplier risk.
- **NGO reports** We consider information highlighted in NGO reports and determine whether action is required.

Our first-tier suppliers (see diagram below) select and manage their own suppliers (HP second-tier suppliers).

## Phase 2: Assessment

If HP's risk assessments show a supplier poses a medium or high SER risk, it must complete a [self-assessment questionnaire](#). These help us identify potential SER performance risks, and help suppliers understand our expectations for conformance to [HP's Electronic Industry Citizenship Coalition \(EICC\) Code of Conduct](#). HP reviews and provides feedback on the self assessment, and suppliers create and implement an improvement plan, if required.

## Phase 3: Validation and improvement

### Validating conformance

HP uses local internal auditing teams, backed by independent verification. We use three types of audits:

- Audits conducted by HP employees.
- Audits conducted by an external organization to verify the results of HP audits or to independently investigate allegations.

- Joint audits conducted by an external organization on behalf of HP and other EICC member companies. This auditing methodology is called the Validated Audit Process (VAP) and was launched in 2010. It is designed to eliminate duplication by providing a common auditing approach that encourages companies in the electronics industry to share audits. We encourage our suppliers to use the VAP as an independent assessment of their performance.

### Responding to nonconformance

We rank levels of nonconformance to HP's EICC Code of Conduct as "major" and "minor" using standard International Organization for Standardization (ISO) guidelines.

A nonconformance does not necessarily mean a violation has been found. It could also mean there are insufficient management systems in place to prevent violations from occurring.

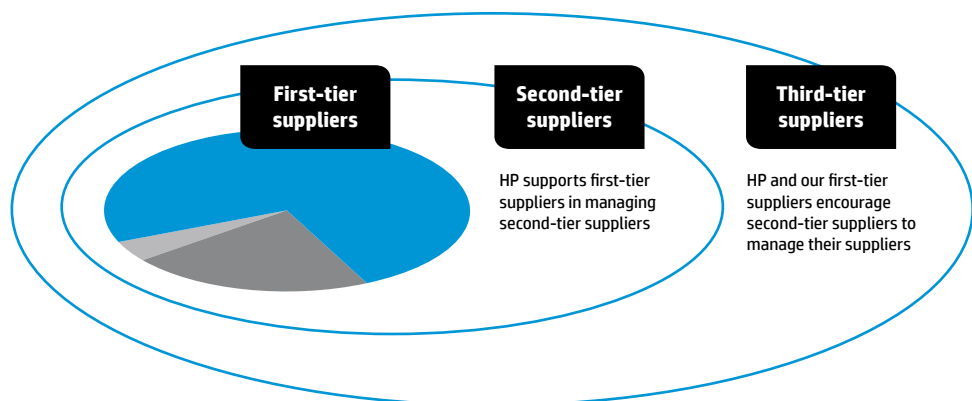
**Major nonconformance** A significant failure in the management system that affects a company's ability to ensure conditions conform to [HP's EICC Code of Conduct](#) or [General Specification for the Environment](#). Suppliers must demonstrate that they have addressed major nonconformances within 180 days, by delivering appropriate documentation or other evidence of resolution.

Zero-tolerance items are the most serious type of nonconformance. These include underage workers (below the local legal age for work or apprenticeship), forced labor, health and safety issues posing immediate danger to life or risk of serious injury, and perceived violation of environmental laws posing serious and immediate harm to the community. Our zero-tolerance policy requires auditors to escalate such items immediately. Suppliers must rectify these items no later than 30 days after the original audit. HP then re-examines the zero-tolerance item between 30 and 90 days after the audit with an in-person visual verification to confirm resolution of the issue.

**Minor nonconformance** Not a systemic problem and typically an isolated finding, such as an out-of-date record or an overdue procedure that has not been revised, from an internal audit or a procedure that has not been revised to reflect a change in regulations. Suppliers have up to 360 days to address minor nonconformances.

### Risk-based approach to supply chain SER

- 649 low-risk suppliers introduced or assessed to date
- 188 suppliers audited through 2011; 50 (or more) will be re-audited in 2012
- 35 (or more) new supplier sites will be audited in 2012



**Corrective action plans** HP requires suppliers to provide a detailed corrective action plan addressing all identified nonconformances (except zero-tolerance items, which are treated independently) within 30 days of receipt of the site audit report. We review these plans and request quarterly reports to monitor progress and subsequent closure of nonconformances. When progress is inadequate, we intervene to help create a more effective plan. (See more in [Detailed audit findings on page 102.](#))

## Phase 4: Capability building

Remaining engaged with suppliers and providing support is as important to our SER program as uncovering problems. Our capability building programs include collaboration with suppliers on key processes, such as reviewing corrective action plans, and implementing training programs in conjunction with local nongovernmental organizations and training groups.

If a supplier rejects the continual improvement approach, we emphasize that we will not tolerate serious or repeated violations of HP's EICC Code and will terminate the relationship if needed. Terminating a contract can mean the loss of jobs, so we prefer to collaborate with suppliers to improve SER performance where possible. (See [Capability building on page 110](#) for more information.)

## Audit strategy

We measure the SER performance of some suppliers using the results of self-assessments, and of others using audits.

We use supplier audits to verify conformance with HP's EICC Code of Conduct and to establish whether the supplier has systems in place to facilitate continued conformance. We perform these audits based on [EICC tools](#). Audits enable HP to identify pressing issues and build corrective action plans with suppliers to address those issues, as well as helping us to prioritize issues to cover in our capability building programs.

Where appropriate, we are increasing the use of the EICC's VAP. Occasionally, HP initiates a VAP of a supplier to verify our own findings or investigate specific allegations.

## Collaborative audits

Achieving suppliers' cooperation is essential to creating lasting improvement. We usually announce audits in advance and conduct them in the presence of facility management. Although this could allow suppliers to present an artificially positive picture, skilled local auditors speaking the native language of the region and our robust audit methodology provide reasonable safeguards against suppliers hiding issues, and we believe this level of collaboration is an important aspect of building capability and helping management understand the issues. Announcing audits also contributes to building and maintaining strong relationships.

## Building suppliers' audit capabilities

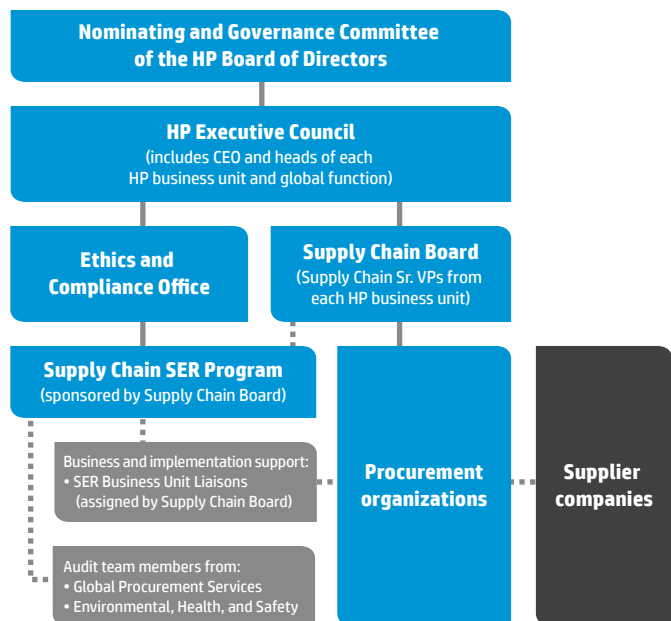
We partner with some of our longer-standing suppliers to improve their ability to audit their own suppliers. This forges a better understanding of the requirements and processes needed to resolve issues while encouraging greater ownership of the audit results and of overall performance.

By building suppliers' internal audit competencies, we allow our auditors to focus more on capability building. All of our lead auditors have been trained as SER consultants to suppliers, helping suppliers improve performance and strengthen their SER management systems.

## Internal collaboration and governance

Our supply chain SER governance system defines responsibility and reporting across HP businesses and functions. All HP businesses support our supply chain SER program through the Supply Chain Board, which meets regularly and reports directly to the HP Executive Council.

### Supply chain governance structure



## SER and procurement from production suppliers

The success of HP's SER program relies on the successful integration of SER issues into our procurement function. Through ongoing relationships with suppliers, HP's procurement team is uniquely positioned to help build suppliers' understanding of how HP's SER requirements translate into business benefits. These relationships include quarterly supplier business reviews and day-to-day engagement in areas such as product quality, product delivery, business continuity, and SER. Our procurement team is trained to undertake SER performance evaluation, education, and mentoring. (See [Case study: HP procurement and supply chain SER on page 113.](#))

HP selects suppliers that agree to conform to the expectations and standards in HP's EICC Code, HP's General Specification for the Environment, and applicable laws and regulations, while meeting our other business requirements. We use High-Performance Supplier Scorecards (HPSS), which include SER parameters alongside traditional business and services criteria, to monitor the performance of suppliers with HP business worth more than \$10 million USD. Suppliers with which HP has business worth less than \$10 million USD are typically still included in the supply chain SER program. We also include SER requirements in every purchase order that we initiate with vendors.

We believe that better social and environmental standards lead to higher-quality products. They also protect our reputation and the continuity of our lines of supply by helping to ensure SER issues do not adversely affect a supplier's production capability. We

believe that the pressures of our sourcing requirements, such as cost and deadlines, should not cause or encourage suppliers to breach HP's EICC Code.

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## Introducing nonproduction suppliers

HP's supply chain SER program has historically focused on production suppliers, which present the greatest SER risk. But since 2009, we have expanded our program to include nonproduction suppliers. We prioritize nonproduction suppliers to introduce to our SER program based on the supplier's risk profile and strategic value to HP.

In 2011, we completed our first audits of nonproduction suppliers. In 2012, we will focus on engaging more suppliers in high-risk countries.

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## Supplier list

HP was the first electronics company to publish a list of suppliers. This list first appeared in our 2007 Global Citizenship Report. Our 2011 list includes first-tier suppliers representing more than 95% of our production supplier spend. Publishing this list remains an industry-leading practice. This year, we have added links when available to more information about our suppliers' SER programs.

View a [list of our production suppliers](#), as of the end of fiscal year 2011.

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# Performance

## Summary audit results

The graph on the next page shows the growth of HP's supply chain social and environmental responsibility (SER) audit program. As our program matures, fewer suppliers enter it, so the proportional increase of initial audits is lower. We conduct a higher proportion of full re-audits to encourage continual improvement. This reflects our focus on supporting long-term SER performance improvements.

## Changes in analysis and comparisons

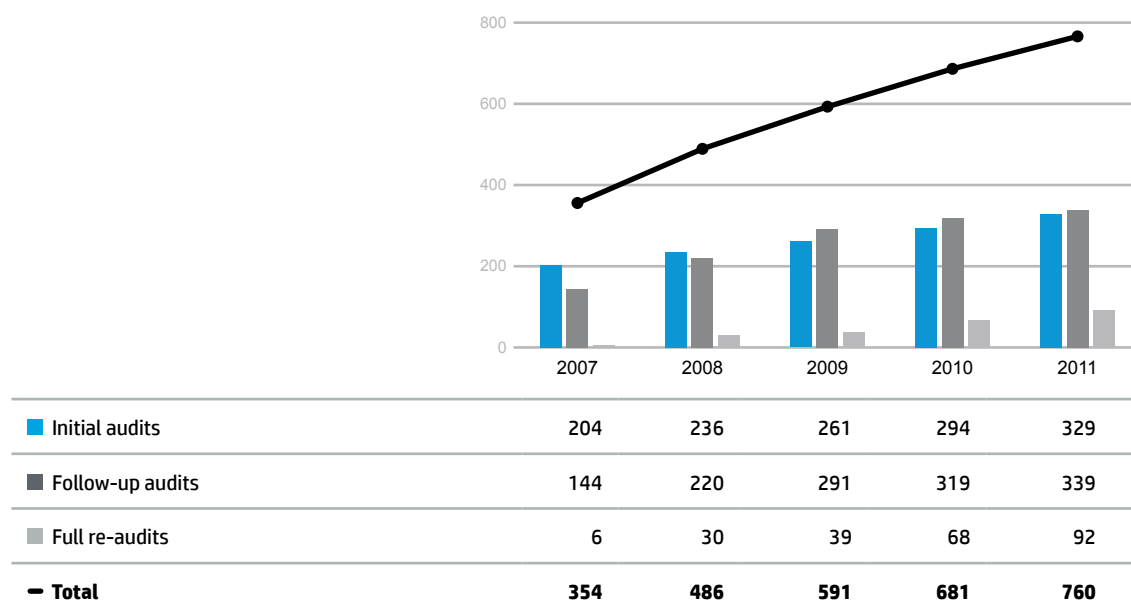
Follow-up audits allow HP to confirm that nonconformances discovered during initial audits are fully closed, while full re-audits show how the supplier has improved management systems and

programs over time. Whereas previously we compared suppliers' performance between initial audit and follow-up audit, we now only compare initial audits with full re-audits. The analysis in this section therefore differs from previous years.

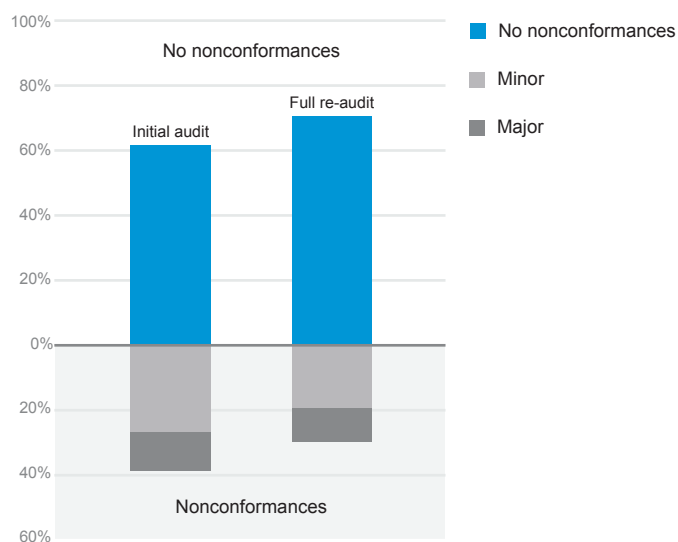
The graph on the next page shows that rates of minor and major nonconformance against HP's Electronic Industry Citizenship Coalition (EICC) Code of Conduct decreased between 2005 and 2011. We attribute this continual improvement to our validation system, with its focus on collaborative audits and corrective actions, and our efforts to build our [suppliers' capabilities](#).



## SER audits conducted, 2007–2011 [total, cumulative]

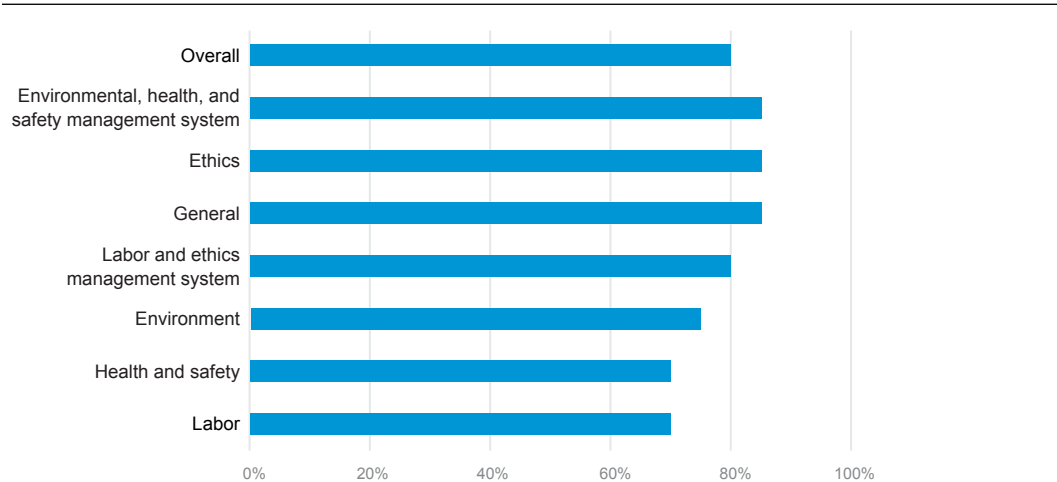


## Distribution of audit findings, 2005–2011 [percentage of findings]



The chart below illustrates the effectiveness of our validation and improvement process, which involves auditing supplier sites and requiring corrective actions. Across all provisions in HP's EICC Code, 80% of all nonconformances identified in initial audits were either reduced in severity or confirmed to be closed in subsequent full re-audits. The chart also demonstrates that nonconformances have been easier to address for some sections of the code than others.

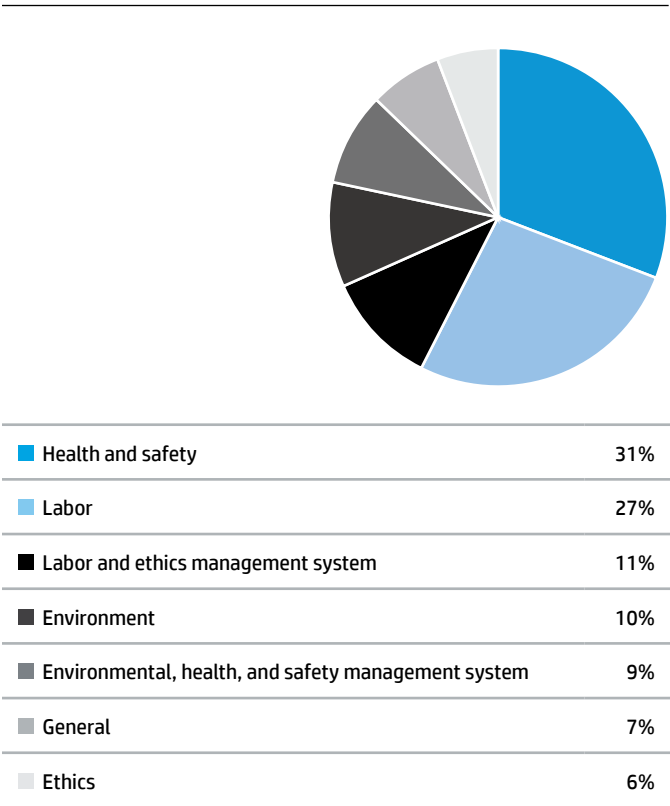
**Nonconformances reduced by section of HP's EICC Code, 2005–2011\*** [percentage]



\* Graph includes only results from initial audits and full re-audits, for comparability.

The chart below shows the distribution of major nonconformances across the provisions of HP's EICC Code from initial and full re-audits in 2010–2011. Health and safety and labor management account for the majority of major nonconformances.

**Distribution of major nonconformances by section of HP's EICC Code, 2010–2011\*** [percentage]



\* Graph includes only results from initial audits and full re-audits, for comparability.

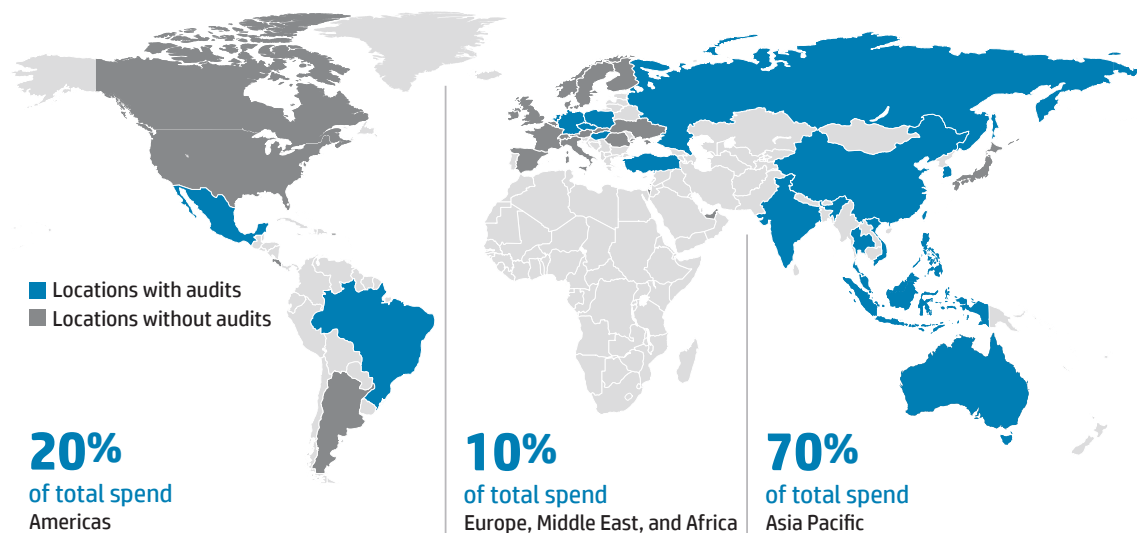
For details about other issues identified in audits and HP's response by region, see [Detailed audit findings on page 102](#).

## Nonproduction supplier audit results

In 2011, HP performed the first three audits of our nonproduction suppliers. These were call center service providers in China and Mexico, and a technology service provider in India. In China and

Mexico, audit results showed labor issues to be less prevalent among nonproduction suppliers than production suppliers. In India, reports from nongovernmental organizations and media have alleged serious social and environmental issues in the facilities of electronics suppliers, including nonproduction suppliers. The audit we conducted of a supplier in that country, however, showed a high level of conformance to HP's EICC Code.

# Detailed audit findings\*



\* Information in map and audit findings relates to production suppliers only.

In 2011, HP conducted 79 supplier site audits (including initial audits, follow-up audits, and full re-audits). Although not represented in these tables, nonproduction supplier sites in China, India, and Mexico accounted for three of these audits. See Nonproduction supplier audit results (above) for an overview of these audits.

## Significant issues

Excessive working hours remain the most common issue in our audits, especially in Asia Pacific and China. In 2011, we also found a high number of major nonconformances related to emergency preparedness. The primary causes of these major nonconformances include issues related to evacuation drills and evacuation routes/emergency exits.

## Responding to zero-tolerance items

In 2011, HP's audits uncovered one zero-tolerance item. An HP plastic component supplier completed a self-assessment questionnaire that raised concerns related to worker living conditions. This prompted HP to perform an audit of the supplier, which found that workers' dormitories at the supplier factory were being locked at night. This was identified as a zero-tolerance item due to lack of safety for workers.

Per HP's zero-tolerance policy, the situation required immediate resolution. HP's audit team and representatives from HP's procurement team responsible for the relationship with the supplier worked with the supplier to address the problem within days. The supplier also attended HP's [Migrant Worker training program](#) to further understand the EICC Code requirements, including those for workers' dormitories.

## Global findings

EICC Code provisions	Rate of nonconformance in sites audited*	
	Major	Minor
<b>General</b>		
EICC Code awareness	5%	13%
Compliance with laws	2%	2%
Supplier management program	27%	29%
<b>Labor</b>		
Freely chosen employment	9%	30%
Child labor avoidance**	2%	52%
Working hours***	66%	13%
Wages and benefits	29%	30%
Humane treatment	4%	30%
Nondiscrimination	16%	13%
Freedom of association	2%	11%
<b>Labor management system</b>		
Overall	13%	0%
<b>Health and safety</b>		
Occupational safety	20%	54%
Emergency preparedness	48%	34%
Occupational injury and illness	18%	39%
Industrial hygiene	20%	34%
Physically demanding work	9%	55%
Machine safeguarding	7%	30%
Dormitory and canteen	16%	32%
<b>Environmental health and safety management</b>		
Overall	9%	0%

EICC Code provisions	Rate of nonconformance in sites audited*	
	Major	Minor
<b>Environmental</b>		
Environmental permits and reporting	4%	5%
Pollution prevention and resource reduction	5%	9%
Hazardous substances	20%	59%
Wastewater and solid waste	0%	9%
Air emissions	4%	4%
Product content restrictions (See <a href="#">Materials on page 36.</a> )		
<b>Ethics</b>		
Business integrity	4%	11%
No improper advantage	4%	9%
Disclosure of information	0%	2%
Intellectual property	2%	2%
Fair business, advertising, and competition	4%	5%
Protection of identity	14%	13%
Community engagement	0%	0%

\* This data reflects the results of HP's initial audits and full re-audits conducted in 2011. It does not necessarily represent results from the same supplier sites reported on in previous years.

\*\* A major nonconformance in the underage worker provision of HP's EICC Code does not necessarily indicate the presence of child labor. For example, an auditor may uncover insufficient management systems and age checks to prevent child workers from being employed. These would be considered a major nonconformance, but do not necessarily signify the presence of workers under the legal minimum, or the minimum age specified by HP's EICC Code. While there were nonconformances uncovered in 2011, no child labor was uncovered.

\*\*\* A major nonconformance in the working hours provision of HP's EICC Code indicates that at least one of the following requirements was not met:

- The average hours worked in a workweek over the last 12 months at the facility did not exceed 60 hours or the legal limit (whichever is stricter).
- Workers are allowed mandated breaks, holidays, and vacation days to which they are entitled.
- Workers are provided with at least 1 day off per 7 workdays on average.

## Greater China findings

The major issues identified during audits in Greater China included emergency preparedness and working hours. Wages and benefits was also an issue, although to a lesser extent.

Since 2009, we have asked certain supplier sites in China with major nonconformances related to working hours to report monthly key performance indicators (KPIs) that track the average number of hours worked and the amount of overtime. (See [Working hours KPIs](#) for more information.)

Our capability building programs in China also enhance awareness of labor rights, helping employees raise concerns with regard to wages and benefits.

### Audits conducted in 2011

Location	Initial audits	Follow-up audits	Full re-audits	Number of workers at sites audited
China	17	7	11	188,900
<b>Total</b>	<b>17</b>	<b>7</b>	<b>11</b>	<b>188,900</b>

EICC Code provisions	Rate of nonconformance in sites audited*	
	Major	Minor
<b>General</b>		
EICC Code awareness	0%	18%
Compliance with laws	0%	4%
Supplier management program	25%	29%
<b>Labor</b>		
Freely chosen employment	11%	29%
Child labor avoidance**	0%	61%
Working hours***	75%	18%
Wages and benefits	39%	46%
Humane treatment	7%	29%
Nondiscrimination	21%	7%
Freedom of association	0%	4%
<b>Labor management system</b>		
Overall	14%	0%

EICC Code provisions	Rate of nonconformance in sites audited*	
	Major	Minor
<b>Health and safety</b>		
Occupational safety	25%	54%
Emergency preparedness	54%	36%
Occupational injury and illness	11%	32%
Industrial hygiene	29%	46%
Physically demanding work	7%	79%
Machine safeguarding	4%	25%
Dormitory and canteen	25%	36%
<b>Environmental health and safety management</b>		
Overall	0%	0%
<b>Environmental</b>		
Environmental permits and reporting	7%	7%
Pollution prevention and resource reduction	7%	4%
Hazardous substances	18%	61%
Wastewater and solid waste	0%	4%
Air emissions	4%	0%
Product content restrictions (See <a href="#">Materials on page 36.</a> )		
<b>Ethics</b>		
Business integrity	4%	11%
No improper advantage	0%	7%
Disclosure of information	0%	0%
Intellectual property	0%	0%
Fair business, advertising, and competition	0%	4%
Protection of identity	7%	11%
Community engagement	0%	0%

\* This data reflects the results of HP's initial audits and full re-audits conducted in 2011. It does not necessarily represent results from the same supplier sites reported on in previous years.

\*\* A major nonconformance in the underage worker provision of HP's EICC Code does not necessarily indicate the presence of child labor. For example, an auditor may uncover insufficient management systems and age checks to prevent child workers from being employed. These would be considered a major nonconformance, but do not necessarily signify the presence of workers under the legal minimum, or the minimum age specified by HP's EICC Code. While there were nonconformances uncovered in 2011, no child labor was uncovered.

\*\*\* A major nonconformance in the working hours provision of HP's EICC Code indicates that at least one of the following requirements was not met:

- The average hours worked in a workweek over the last 12 months at the facility did not exceed 60 hours or the legal limit (whichever is stricter).
- Workers are allowed mandated breaks, holidays, and vacation days to which they are entitled.
- Workers are provided with at least 1 day off per 7 workdays on average.

## Asia Pacific findings

In Asia Pacific, our audits identified working hours and emergency preparedness as significant issues. We will use working hours KPIs to address the working hours issue based on our experience in China. We track KPIs from suppliers with major working hours nonconformances in China to better understand the extent of the problem and solutions to reduce the instances of major nonconformances.

### Audits conducted in 2011

Location	Initial audits	Follow-up audits	Full re-audits	Number of workers at sites audited
Australia	1	0	0	200
Indonesia	0	2	0	3,100
Malaysia	5	3	1	14,500
Philippines	1	0	1	3,900
Singapore	3	0	1	1,500
Thailand	0	1	1	13,900
<b>Total</b>	<b>10</b>	<b>6</b>	<b>4</b>	<b>37,100</b>

EICC Code provisions	Rate of nonconformance in sites audited*	
	Major	Minor
<b>General</b>		
EICC Code awareness	21%	7%
Compliance with laws	7%	0%
Supplier management program	21%	14%
<b>Labor</b>		
Freely chosen employment	14%	36%
Child labor avoidance**	7%	50%
Working hours***	86%	7%
Wages and benefits	29%	14%
Humane treatment	0%	43%
Nondiscrimination	21%	14%
Freedom of association	7%	36%
<b>Labor management system</b>		
Overall	21%	0%

EICC Code provisions	Rate of nonconformance in sites audited*	
	Major	Minor
<b>Health and safety</b>		
Occupational safety	29%	14%
Emergency preparedness	43%	29%
Occupational injury and illness	21%	50%
Industrial hygiene	14%	21%
Physically demanding work	0%	21%
Machine safeguarding	14%	29%
Dormitory and canteen	7%	50%
<b>Environmental health and safety management</b>		
Overall	36%	0%
<b>Environmental</b>		
Environmental permits and reporting	0%	0%
Pollution prevention and resource reduction	0%	14%
Hazardous substances	21%	57%
Wastewater and solid waste	0%	14%
Air emissions	7%	0%
Product content restrictions (See <a href="#">Materials on page 36.</a> )		
<b>Ethics</b>		
Business integrity	7%	7%
No improper advantage	14%	0%
Disclosure of information	0%	7%
Intellectual property	0%	0%
Fair business, advertising, and competition	14%	0%
Protection of identity	14%	14%
Community engagement	0%	0%

\* This data reflects the results of HP's initial audits and full re-audits conducted in 2011. It does not necessarily represent results from the same supplier sites reported on in previous years.

\*\* A major nonconformance in the underage worker provision of HP's EICC Code does not necessarily indicate the presence of child labor. For example, an auditor may uncover insufficient management systems and age checks to prevent child workers from being employed. These would be considered a major nonconformance, but do not necessarily signify the presence of workers under the legal minimum, or the minimum age specified by HP's EICC Code. While there were nonconformances uncovered in 2011, no child labor was uncovered.

\*\*\* A major nonconformance in the working hours provision of HP's EICC Code indicates that at least one of the following requirements was not met:

- The average hours worked in a workweek over the last 12 months at the facility did not exceed 60 hours or the legal limit (whichever is stricter).
- Workers are allowed mandated breaks, holidays, and vacation days to which they are entitled.
- Workers are provided with at least 1 day off per 7 workdays on average.



## Europe findings

The audits uncovered major nonconformances in health and safety provisions such as emergency preparedness, occupational injury and illness, and physically demanding work. Despite these findings, suppliers in Europe have made strong improvements in social and environmental responsibility (SER) performance. For example, 2011 audits resulted in significant decreases in the number of findings related to pollution prevention and resource reduction compared with 2010.

### Audits conducted in 2011

Location	Initial audits	Follow-up audits	Full re-audits	Number of workers at sites audited
Czech Republic	2	2	3	5,200
Hungary	0	1	1	1,900
Poland	0	1	0	700
Turkey	1	0	0	200
<b>Total</b>	<b>3</b>	<b>4</b>	<b>4</b>	<b>8,000</b>

EICC Code provisions	Rate of nonconformance in sites audited*	
	Major	Minor
<b>General</b>		
EICC Code awareness	0%	0%
Compliance with laws	0%	0%
Supplier management program	29%	43%
<b>Labor</b>		
Freely chosen employment	0%	14%
Child labor avoidance**	0%	29%
Working hours***	14%	0%
Wages and benefits	14%	29%
Humane treatment	0%	14%
Nondiscrimination	0%	14%
Freedom of association	0%	0%
<b>Labor management system</b>		
Overall	0%	0%

EICC Code provisions	Rate of nonconformance in sites audited*	
	Major	Minor
<b>Health and safety</b>		
Occupational safety	0%	100%
Emergency preparedness	29%	43%
Occupational injury and illness	29%	29%
Industrial hygiene	14%	0%
Physically demanding work	29%	14%
Machine safeguarding	14%	29%
Dormitory and canteen	0%	0%
<b>Environmental health and safety management</b>		
Overall	0%	0%
<b>Environmental</b>		
Environmental permits and reporting	0%	0%
Pollution prevention and resource reduction	0%	0%
Hazardous substances	0%	71%
Wastewater and solid waste	0%	0%
Air emissions	0%	14%
Product content restrictions (See <a href="#">Materials on page 36.</a> )		
<b>Ethics</b>		
Business integrity	0%	0%
No improper advantage	0%	0%
Disclosure of information	0%	0%
Intellectual property	0%	0%
Fair business, advertising, and competition	0%	0%
Protection of identity	14%	29%
Community engagement	0%	0%

\* This data reflects the results of HP's initial audits and full re-audits conducted in 2011. It does not necessarily represent results from the same supplier sites reported on in previous years.

\*\* A major nonconformance in the underage worker provision of HP's EICC Code does not necessarily indicate the presence of child labor. For example, an auditor may uncover insufficient management systems and age checks to prevent child workers from being employed. These would be considered a major nonconformance, but do not necessarily signify the presence of workers under the legal minimum, or the minimum age specified by HP's EICC Code. While there were nonconformances uncovered in 2011, no child labor was uncovered.

\*\*\* A major nonconformance in the working hours provision of HP's EICC Code indicates that at least one of the following requirements was not met:

- The average hours worked in a workweek over the last 12 months at the facility did not exceed 60 hours or the legal limit (whichever is stricter).
- Workers are allowed mandated breaks, holidays, and vacation days to which they are entitled.
- Workers are provided with at least 1 day off per 7 workdays on average.

## Latin America findings

Major nonconformances were found in relation to emergency preparedness; however, the rate of occurrence of these findings has decreased since 2010. Suppliers in Latin America have improved their performance against health and safety, labor, and environmental provisions of HP's EICC Code compared with 2010.

### Audits conducted in 2011

Location	Initial audits	Follow-up audits	Full re-audits	Number of workers at sites audited
Brazil	2	1	5	11,300
Mexico	0	2	0	5,700
<b>Total</b>	<b>2</b>	<b>3</b>	<b>5</b>	<b>17,000</b>

EICC Code provisions	Rate of nonconformance in sites audited*	
	Major	Minor
<b>General</b>		
EICC Code awareness	0%	14%
Compliance with laws	0%	0%
Supplier management program	43%	43%
<b>Labor</b>		
Freely chosen employment	0%	43%
Child labor avoidance**	0%	43%
Working hours***	43%	14%
Wages and benefits	0%	0%
Humane treatment	0%	29%
Nondiscrimination	0%	29%
Freedom of association	0%	0%
<b>Labor management system</b>		
Overall	0%	0%

EICC Code provisions	Rate of nonconformance in sites audited*	
	Major	Minor
<b>Health and safety</b>		
Occupational safety	0%	86%
Emergency preparedness	57%	29%
Occupational injury and illness	29%	57%
Industrial hygiene	0%	57%
Physically demanding work	14%	71%
Machine safeguarding	0%	57%
Dormitory and canteen	14%	14%
<b>Environmental health and safety management</b>		
Overall	0%	0%
<b>Environmental</b>		
Environmental permits and reporting	0%	14%
Pollution prevention and resource reduction	14%	29%
Hazardous substances	43%	43%
Wastewater and solid waste	0%	29%
Air emissions	0%	14%
Product content restrictions (See <a href="#">Materials on page 36.</a> )		
<b>Ethics</b>		
Business integrity	0%	29%
No improper advantage	0%	43%
Disclosure of information	0%	0%
Intellectual property	14%	14%
Fair business, advertising, and competition	0%	29%
Protection of identity	43%	0%
Community engagement	0%	0%

\* This data reflects the results of HP's initial audits and full re-audits conducted in 2011. It does not necessarily represent results from the same supplier sites reported on in previous years.

\*\* A major nonconformance in the underage worker provision of HP's EICC Code does not necessarily indicate the presence of child labor. For example, an auditor may uncover insufficient management systems and age checks to prevent child workers from being employed. These would be considered a major nonconformance, but do not necessarily signify the presence of workers under the legal minimum, or the minimum age specified by HP's EICC Code. While there were nonconformances uncovered in 2011, no child labor was uncovered.

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- Workers are allowed mandated breaks, holidays, and vacation days to which they are entitled.
- Workers are provided with at least 1 day off per 7 workdays on average.

## Working hours KPIs

HP is making a concerted effort to reduce instances of excessive working hours in our suppliers' facilities, as this is one of the main sources of nonconformance in audits. HP's EICC Code requirement states that workweeks are not to exceed the maximum set by local law and, further, a workweek should not be more than 60 hours per week, including overtime except in emergency or unusual situations.

Since 2009, we have required supplier sites in China with major nonconformances related to working hours to report monthly KPIs that track the amount of overtime and the number of days each worker has off per week. The data we have received showed that

for 65% of those suppliers the average working week is less than 60 hours per week including overtime. Additionally, the number of people working less than 60 hours per week has increased 10% over the past 2 years. In particular, we have seen positive results when a facility's management has acknowledged the benefits of reporting and monitoring these KPIs.

Currently, more than 70% (by spend) of supplier sites in China with major nonconformances related to working hours report monthly KPIs to us, and we aim to increase that to 75% by the end of 2012. In 2011, HP began verifying supplier KPI data as part of SER supplier audits. We did not find any inaccuracies between our audit findings and the self-reported data from our suppliers.

# Collaboration

The larger electronics manufacturers typically supply numerous major brands. In the information technology (IT) supply chain, many companies are both suppliers to and customers of each other.

Electronics manufacturers and brands therefore benefit from collaboration. It allows them to share best practices and resources, standardize tools and processes, avoid duplication, and develop consistent approaches to improving social and environmental responsibility (SER) performance. Moreover, suppliers' appreciation of strong SER performance heightens when they receive a consistent message from many of their customers.

HP also learns from the experiences of companies outside of our industry. This collaboration generally occurs through multi-sector initiatives.

Examples of collaboration within our industry and across others include:

## General

- **Electronic Industry Citizenship Coalition (EICC)** HP has been a member of the [EICC](#), with board representation, since 2004. Through joint collaboration, the EICC has helped member companies, and the electronics industry as a whole, achieve significant SER progress. In 2011, HP benefited from EICC collaboration through:

- The collection of greenhouse gas emissions data for 95% of suppliers by spend, as part of the EICC's carbon reporting system
- The launch of EICC-ON, a technology platform that helps members store and share [EICC Code of Conduct compliance data from suppliers](#)

- **Supply chain best practice** HP works with the Global Social Compliance Program (GSCP)—a group of leading companies from the retail, clothing, and food industries—to improve social and environmental conditions in the supply chains of multiple sectors. In 2011, the GSCP implemented a program to assist companies to benchmark their systems, tools, and processes against existing best practices. HP is using this program to drive ongoing improvement of existing supply chain SER practices. HP Director of Social and Environmental Sustainability and Compliance [Zoe McMahon](#) serves on the organization's board, and several HP representatives participate as working group members.

- **Labor conditions in the Pearl River Delta** The [Dutch Sustainable Trade Initiative](#) (IDH), a multi-stakeholder effort, aims to accelerate sustainable trade by building impact-oriented coalitions of leading multinationals, civil society organizations, governments, and other stakeholders. In 2011, the IDH introduced a sustainability plan for 100 electronics manufacturers located in the Pearl River Delta region in China, a heavily industrial area. The primary goal of the plan is to improve working conditions at factories. HP is helping to develop the plan and encouraging suppliers to engage in IDH assessments.

## Environment

- **Energy Efficiency Partnership program** HP works with [BSR](#) to reduce the environmental impact of HP's product manufacturing activities by creating and promoting local energy-efficiency programs at supplier factories in China. (See [Manufacturing on page 38](#) for more information.)

## Human rights

- **Extractives issues** HP led the establishment of the EICC Global e-Sustainability Initiative (GeSI) Extractives Work Group on extractives issues. HP was one of the leading member companies contributing to the development of a conflict-free smelter validation program, an in-region mineral certification system, a regional social support service, Organisation for Economic Co-operation Development (OECD) Due Diligence Guidance, and a concept paper for a public-private partnership. (See [Conflict minerals on page 87](#) for more information.)
- **Global Business Initiative on Human Rights (GBI)** HP is a founding member of GBI. We aim to show leadership and raise awareness of human rights issues within the business community and to contribute to the development of practical approaches by testing emerging best practices in our operations and supply chain. (See [Human rights on page 85](#) for more information.)

## Sharing experiences

Our supply chain SER program staff regularly contribute to external publications and share our experiences with other organizations. In 2011, these efforts included:

- [The Interfaith Center on Corporate Responsibility](#) (ICCR) report, “Social Sustainability Resource Guide: Building Sustainable Communities through [Multi-Party Collaboration](#),” features HP’s collaboration with Hong Kong nongovernmental organization (NGO) Students and Scholars Against Corporate Misbehavior (SACOM) to develop labor rights training programs for workers. HP’s former director of Social and Environmental Sustainability and Compliance, Judy Glazer, was a co-author of the report.
- The [Hong Kong Productivity Council](#) (HKPC), a quasigovernmental organization, published “Green and Ethical Procurement Requirements,” a global sourcing guidebook that references HP’s SER program as the pioneer and leader in green and ethical procurement.

## External monitoring

A number of third-party organizations, particularly NGOs, raise concerns regarding specific issues in the electronics industry supply chain and aim to improve performance through producing assessment reports and direct contact with companies. This input is an important barometer of current and emerging supply chain issues.

Notable external monitoring in 2011 included:

## Environment

- **Climate Counts Company Scorecard** HP ranked number two overall. The ranking scores companies on climate-awareness building among suppliers and partners, and companies’ use of life cycle assessment to improve the environmental performance of their products. HP was the leading company in the electronics sector.

## Labor

- **Labor rights in Mexico** “The Crisis that Never Went Away,” Centro de Reflexión y Acción Laboral’s (CEREAL) fourth report on conditions in Mexican electronics factories, raised concerns about low wages, absence of freedom of association, and temporary employment. The report ranked HP as “good” (one of only two companies to receive that ranking, the highest received by any company and one ranking short of “excellent,” the highest possible ranking), based on the number of incidents and their severity, our willingness to engage in dialogue, our efficiency in resolving cases, structural changes made to improve working conditions, and worker testimonies.
  - **Migrant worker mistreatment in Malaysia** Several reports in 2011 alleged mistreatment of migrant workers in the electronics industry in Malaysia. The allegations included:
    - [GoodElectronics](#), an NGO dedicated to improving the environmental and social performance of electronics companies, published a report profiling a Malaysia-based HP supplier. The report alleged that the supplier was mistreating migrant workers, withholding passports, enforcing excessive working hours, and overlooking certain health and safety issues. HP investigated the claim with the supplier, reviewed the company’s corrective action plan, and conducted a full follow-up audit that confirmed resolution of the issues.
    - Malaysian media reported that an HP supplier had illegally employed migrant workers without working permits, after the Malaysian Director General of Immigration delayed the approval of these permits. Subsequently, the Director General released a statement confirming that the Immigration Department will issue permits in a timely manner and that workers should hold on to their passports.
- To raise awareness of the issue among suppliers, HP held a training program in August 2011 regarding the guidelines for employing migrant workers.
- **Poor working conditions in China** NGO [China Labor Watch](#) (CLW) released two reports regarding poor working conditions at electronics manufacturing suppliers in China:
    - One report alleged serious working condition issues at an HP supplier, including discrimination; excessive working hours; no paid sick, maternal, or marriage leave; and low wages. HP worked with the supplier to implement a corrective action plan, and the supplier committed to investing more resources into improving conditions. The supplier now reports monthly key performance

indicators (KPIs) to HP, allowing both companies to more closely monitor performance. The KPIs showed that the supplier eliminated excessive overtime during the last 6 months of 2012 and that it complied with EICC Code requirements relating to working hours throughout the last 2 months.

- A broader report, entitled “Tragedies of Globalization: The Truth Behind Electronics Sweatshops,” investigated working conditions at nine electronics companies in China. HP was not one of those nine companies featured in the report; however, we were mentioned in it. Our supply chain SER program addresses many of the issues that the report highlighted, such as working hours, labor contracts, and discrimination.

- **Supply Chain Ethics and Values Prize** [The Confederation of Industrial Chambers of Mexico](#) (CONCAMIN), a business group, awarded HP the Supply Chain Ethics and Values Prize for the third consecutive year. The award, presented by Mexican President Felipe Calderón, recognizes best practices in Mexico in engaging suppliers in SER initiatives.

## Human rights

- **Corporate challenges in repressive regimes and conflict zones** Swedish business relations NGO Swedwatch’s report, “[Passive Observers or Active Defenders of Human Rights?](#)” discussed the positive impact of HP’s supply chain SER program, focusing on workers’ rights training.

# Capability building

While HP’s audits help to assess the application of social and environmental responsibility (SER) standards and performance at supplier factories, they are only one part of our program. We also work with suppliers to deliver substantial and lasting SER performance improvements on a broad range of issues. Creating lasting change, however, takes time. Our suppliers must not only improve their management capabilities, but also often challenge a prevailing culture. Our work builds knowledge and strengthens processes, educating employees throughout supplier organizations. We aim to instill behavioral changes that shift less developed practices away from historical norms toward ever-improving SER performance.

Supplier capabilities are built most effectively through collaboration. HP works with local nongovernmental organizations (NGOs) and training groups to deliver our programs. These are directed toward supplier management and workers, and address general awareness of HP’s Electronic Industry Citizenship Coalition (EICC) Code of Conduct, ethics, labor, health and safety, environment, and management systems.

## Demonstrating results

The graphs on the following pages illustrate performance improvements made by suppliers that have participated in HP capability building programs. These suppliers have shown greater decreases in the number of major nonconformances found in full re-audits (across all audit categories) than suppliers that did not participate.

Since HP began working with suppliers on capability building programs in 2006, we have:

- Carried out 19 programs in 9 countries on topics such as antidiscrimination, energy efficiency, labor rights, and women’s health
- Engaged about 60% of production suppliers (by spend)
- Impacted approximately 2,500 managers and 136,000 workers
- Trained about 150 second-tier suppliers
- Confirmed performance improvements by suppliers engaging in capability building programs, as verified by audits

## Introducing new suppliers

We introduce new suppliers to our supply chain SER program each year and hold supplier education forums to communicate our SER expectations. In 2011, we held 10 events in China.

As our relationships with suppliers develop, we work to instill good practices among lower-tier suppliers as well. HP has trained more than 150 second-tier suppliers through programs conducted jointly with our first-tier suppliers.

## HP's capability building initiatives 2011

Below are examples of our main capability building programs in 2011.

### EICC Code of Conduct awareness

#### Supplier forum in China

**Audience:** Management (more than 180 participants from 90 suppliers)

We held a 2-day supplier meeting in China, which communicated our expectations and requirements regarding HP's EICC Code to suppliers. Verite, one of our larger, long-term training partners, facilitated a day-long training session on enhancing management systems. We also invited suppliers and specialists to share best practices and experiences from previous capability building initiatives such as the HERproject and our Energy Efficiency Partnership program.

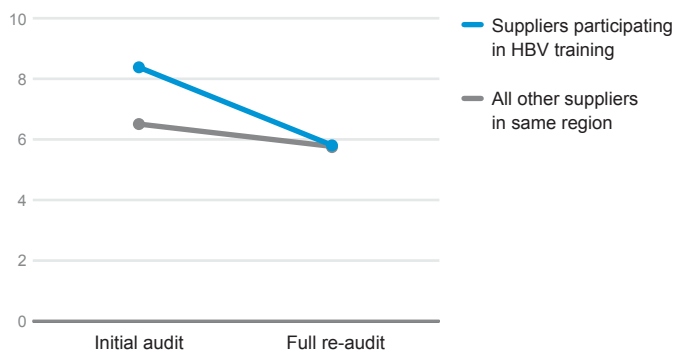
### Labor and ethics

#### Hepatitis B anti-discrimination program

**Audience:** Workers and management (70,000 workers at 15 facilities)  
**Partner:** Inno Community Development Organisation

HP considers hepatitis B (HBV) tests in employee hiring processes to be violations of the nondiscrimination provision of HP's EICC Code. We have held training programs in China since 2009 to raise awareness of hepatitis B and eliminate discrimination. In 2011, we expanded the program, reaching approximately 50,000 workers in addition to 20,000 the prior year. Through handouts and on-site promotions, we educated employers about the risks of discriminatory practices and improved workers' understanding regarding the spread of HBV. Facilities that have taken part in the Hepatitis B anti-discrimination program have reduced the number of major nonconformances found in full re-audits by about 30% on average, compared with an average decrease of 10% for all other suppliers in the same region.

**HBV training participation and SER performance, 2007–2011**  
(average number of major nonconformances)



### Gender Equity Model (Modelo de Equidad de Genero—MEG) Certification Program

**Audience:** Management (six suppliers trained and certified)

**Partner:** [Instituto Nacional de las Mujeres](#)

Led by the Instituto Nacional de las Mujeres in Mexico, a government institution, MEG trains and certifies suppliers on management systems related to gender equality and harassment. The main objective of this model is to encourage companies to adopt nondiscrimination policies and avoid harassment in the workplace. HP invites suppliers to take part in the program.

#### Migrant labor training

**Audience:** Management (33 managers from 19 suppliers)

**Partner:** Monitoring Sustainability of Globalization

In response to rising issues regarding the use and treatment of migrant workers in Southeast Asia, HP delivered best practice training to senior managers of suppliers in Malaysia and Singapore. HP's supply chain SER team shared HP's new guidelines for employing migrant workers and carried out a gap analysis of suppliers in the region to determine where the guidelines were not being used. HP plans to place more focus on management systems for migrant workers in audits during 2012.

#### Predeparture training

**Audience:** Facility and school trainers (180 trainers from 3 training centers)

**Partner:** Labour Education and Service Network (LESN)

NGOs have raised concern about suppliers in China recruiting labor from vocational schools under the pretense of internships to learn technical skills. Reports suggest these young workers are instead used as unskilled labor for manufacturing. In addition to our work to improve understanding of HP's EICC Code, we have implemented predeparture training for suppliers and schools to address the issue. This teaches facility and school trainers how to prepare interns for work life, including knowledge of labor rights and occupational health, and how to adapt to city life. Each participant received a guide on how to deliver the training. In 2011, sessions were held in three areas across China. We reached more than 23,400 graduates and interns through the program. (See [Perspective: So Sheung on page 113](#) and [Goals: society on page 166](#) for more information.)

### So Sheung

**Chief Executive, LESN**

So worked with HP to help suppliers and schools educate interns about labor rights, occupational health, and other issues. Read So's [full perspective on page 113](#).





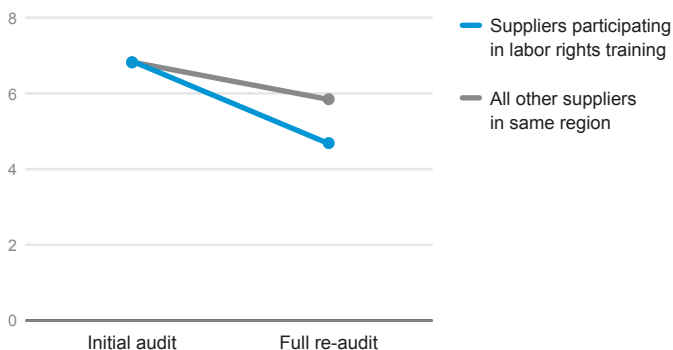
## Worker management communications

**Audience:** Management and workers (more than 15,000 management and workers from 17 facilities)

**Partner:** Xin Shi Min Zhi Jia (Chinese NGO)

HP introduced our worker management communications training in 2008. The program continues to help workers better understand their labor rights and how they can raise grievances about their working environment. We also provide training to workers' representative committees. Facilities that have taken part in worker management communications training or other labor rights awareness training have reduced the number of major nonconformances found in full re-audits by about 30% on average, compared with a 15% decrease on average for all other suppliers in the same region.

### Worker management communications and SER performance, 2007–2011 (average number of major nonconformances)



## Health and safety

### Health Enables Return (HER) project

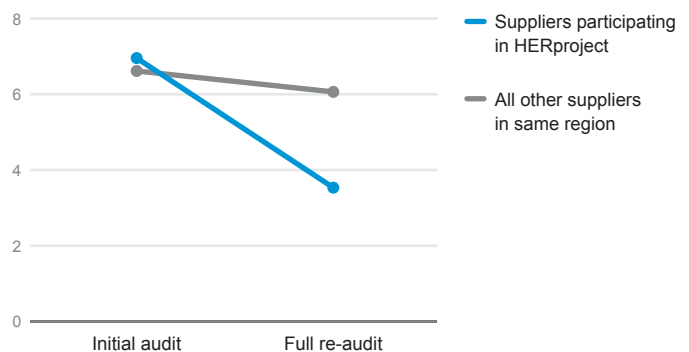
**Audience:** Workers (approximately 30,000 workers at 10 supplier sites in China and Mexico since 2008)

**Partner:** [BSR](#)

The [HERproject](#) addresses the general and reproductive health needs of women working in manufacturing in a range of industries, including electronics. The program focuses on AIDS and sexually transmitted disease prevention, birth control, peer education, and demonstrating the business benefits of encouraging worker health and development. HP began participating in the project in Mexico in 2008 (working with [Pegatron](#) and [Foxconn](#)). In 2011, the third year we've run the program in China, we worked with eight suppliers sites, reaching more than 26,000 female workers.

Facilities that have taken part in the HERproject have reduced the number of major nonconformances found in full re-audits by about 49% on average, compared with an 8% decrease on average for all other suppliers in the same region.

### HERproject participation and SER performance, 2007–2011 (average number of major nonconformances)



## Job stress prevention

**Audience:** Workers (16 suppliers)

**Partner:** Hong Kong Workers Health Centre

HP hosted sessions to encourage frontline workers to become involved in improving their own working conditions, a preventative measure aimed at reducing stress. Sessions on work stress management informed workers about the Mental Health Action checklist, which contains guidelines for workers to help them maintain a healthy, reduced-stress working environment. The instructor was a well-known occupational health professional who previously served as the director of Working Conditions and Environment at the International Labour Organization (ILO). In 2012, we will ask workers to evaluate their own mental health and occupational health issues.

## Environmental

### Energy Efficiency Partnership program

**Audience:** Management

**Partner:** [BSR](#)

In 2011, HP continued working with the BSR Energy Efficiency Partnership program in China to help major suppliers reduce energy use, cut greenhouse gas emissions, and lower costs. See [Manufacturing on page 38](#) for more information. In 2012, we plan to expand our role by partnering with the [World Wildlife Fund](#), adding resources and extending the reach of the initiative to additional companies. Program participation will total 34 suppliers and 50 sites across China, up from 8 suppliers and 12 sites in 2011.

## Management systems

### Toward sustainable compliance

**Audience:** Management (35 managers from 32 suppliers)

**Partner:** [Western Digital](#)

In 2011, HP expanded our hard disk drive supplier SER program to include suppliers in Malaysia, having previously only focused on suppliers in Thailand. HP and key first-tier suppliers use the program to raise awareness of HP's EICC Code. The program also facilitated best practice sharing among supplier management

while supporting them to implement SER-related management systems. The 2011 training included HP's first-, second-, and third-tier suppliers.

#### Hard disk drive supplier SER program implementation

**Audience:** Management (90 managers from 27 suppliers)

**Partner:** [Western Digital](#)

In 2011, HP ran a program to help first-tier suppliers prepare for an EICC Code of Conduct audit. The program covered topics including documentation and the importance of worker and management interviews, while also allowing suppliers to share experiences regarding challenges and opportunities.

See descriptions of our historical capability building initiatives in our [2008](#), [2009](#), and [2010](#) Global Citizenship Reports.

### Case study: HP procurement and supply chain SER

HP's procurement organization manages the company's relationships with its suppliers. This involves a high level of ongoing interaction. Our procurement employees share guidance and expertise with supplier representatives, which contributes to HP's success as well as to the advancement and maturity of suppliers.

This close communication includes a focus on supplier social and environmental responsibility (SER). Kinnar Ghiya, director of Strategic Sourcing and part of the Operations organization with HP's Imaging and Printing Group (IPG), says that establishing a supplier base that shares our recognition of the importance of SER is crucial to HP's ongoing success.

To make this happen, HP includes SER considerations in all engagement with suppliers—from contractual language to scorecards that assess a supplier's overall performance (see [SER and procurement](#)).

Suppliers take seriously SER concerns raised by our procurement employees. And, Ghiya notes, suppliers appreciate HP's focus in this area. "Suppliers know that HP invests considerable resources and time to improve supplier accountability and performance with regard to SER. They appreciate the support that HP procurement professionals provide to get things right."

A recent supplier SER concern that HP has helped to address is migrant workers in Southeast Asia. Due to the rapid growth of the electronics manufacturing industry in Southeast Asia, facilities increasingly employ migrant workers. According to some reports, migrant workers may be unfamiliar with their rights and language barriers may prevent them from communicating freely.

HP works to educate suppliers about these and related risks. We stress the importance of conducting thorough SER risk assessments, developing management tools to help prevent issues from arising, and promptly addressing issues when they do arise. We also hold workshops and speaking events to convene suppliers to learn from HP and external experts, as well as from each other.

For example, in 2011 HP held a training program to inform Malaysian suppliers of the appropriate guidelines for employing migrant workers (based on the EICC Code as well as Foreign Migrant Worker rules and other requirements) and to share best practices. Thirty-three managers from 19 suppliers participated in the event, at which Ghiya delivered a keynote address. HP plans to continue to focus in this area during 2012. See [Capability building on page 110](#) for more detail.

# Perspective: So Sheung

**Note from HP:** During the last several years, NGOs have raised concern about suppliers in China recruiting labor from vocational schools under the pretense of internships to learn technical skills. Reports suggest these young workers are instead used as unskilled labor for manufacturing. We have implemented predeparture training for suppliers and schools, which teaches facility and school trainers how to educate interns about issues such as labor rights and occupational health, and how to adapt to city life. In 2011, sessions were held in three areas across China: Chongqing, Guangzhou, and Wuhan. We reached more than 23,400 graduates

and interns through the program. HP is also involved in the Electronic Industry Citizenship Coalition Asia Steering Committee student workers project. The initiative is working to review the status of student workers in the supply chain, summarize the legal requirements for employing student workers, and implement guidelines to drive compliance in this area.

We asked So Sheung, Chief Executive, Labour Education and Service Network (LESN), to speak about the issue and HP's activities in this area.



## So Sheung

Chief Executive, LESN

**Q:** Why are companies in China hiring students from technical schools more regularly?

**A:** Students make up a large and highly flexible labor pool. Official statistics from 2009 state that more than 17 million students were registered in more than 10,000 technical schools, and about 7 million graduate annually. All technical school students are required to fulfill a 1-year internship or placement, and most of them are sent to electronics manufacturing facilities. The internships are agreed to between schools and employers. Any school can send several hundred students to internships in one facility with only a few weeks “lead time.”

Students in internships are not regarded as formal workers under Chinese labor law, so some factories use student workers to lower costs.

**Q:** What are the expectations of a young worker taking a job with a company like those that supply HP?

**A:** Younger generation workers are more aware of labor rights. Unlike their parents, who typically returned to their home locations, younger workers expect to stay in the cities where they find jobs. Work satisfaction, job prospects, respect, and quality of life are as important to them as their salaries.

**Q:** What are the objectives of predeparture training?

**A:** The objective of predeparture training is to better prepare workers for living and working in new cities. It aims to:

- Improve students’ awareness of labor rights and laws, occupational health and safety, reproductive health and hygiene, sexual harassment, and HIV/AIDS prevention, among other issues.
- Improve students’ self-esteem and psychological preparation for working in cities.
- Improve students’ self-preservation skills and awareness.

We hope to train teachers and factory personnel to better understand student workers. This way, employers can provide suitable training and work environments for students, help prepare them for the type of work they will be doing, and inform them about students’ rights associated with this work. However, it can be challenging to find good teachers for the program.

**Q:** Can you explain the importance of HP’s role in providing this training?

**A:** The use of student workers is highly problematic in China. One of the major risks is schools violating regulations and sending students under 16 to work in factories. HP is a crucial business partner for factories. HP raises student worker issues to factories by spreading awareness through this training.

**Q:** What impact has HP had through its involvement?

**A:** HP has successfully introduced or increased awareness of issues relating to student workers to a few major suppliers, and instigated several large-scale training programs.

**Q:** What else could HP do?

**A:** We expect the issue of student workers to continue to raise social concerns in China. It would be beneficial for HP to take an even stronger role in alleviating this growing problem.

HP has focused on initial induction trainings for teachers and personnel. HP could develop more in-depth programs with key suppliers and provide more comprehensive training for vocational school teachers. HP could also evaluate the effectiveness of this model to understand how much awareness has been raised among student workers.

**Q:** How do you plan to evolve the program in the future?

**A:** We would like to make the program more in depth, delivering training to vocational school teachers over a longer, more intensive period at certain schools or factories. The program should develop participatory evaluations with the workers receiving the trainings for continuous improvement.



Teachers participate in predeparture training.

## LESN

Established in 2001, LESN is an independent labor NGO aiming to empower workers in mainland China. LESN provides a wide range of services to numerous migrant workers in the Pearl River Delta region, including labor dispute hotlines and support services, worker awareness raising activities, in-factory training workshops, hospital visits and support to industrial accident victims, and various recreational activities. To increase public support for migrant workers, LESN also publishes books on the poor conditions of some workers in China. With support from various government and university partners, LESN also organizes labor service projects and advocacy conferences on labor-related regulations.

## Feedback from training

- 工厂需要多了解学生的期望  
(Factories need to better understand worker expectations.)
- 解决新生代工人问题的方法是多样的  
(The new generation of migrant workers must be handled differently.)
- 沟通与培训方式是留住员工的关键因素  
(Communications and training are crucial to decreasing worker turnover.)

# Supplier diversity

[Register your interest in becoming a supplier to HP.](#)

Diverse suppliers bring innovation to HP's supply chain, helping us gain a competitive advantage while supporting our global citizenship efforts. HP's Global Supplier Diversity program helps create a supply chain that is diverse, inclusive, and global—similar to our customers and employees.

HP has maintained a Global Supplier Diversity Office for more than 40 years. We belong to more than 20 supplier diversity organizations in Asia, Canada, Europe, and the United States. Our supplier diversity program supports minority-, woman-, veteran-, lesbian-, bisexual-, gay-, and transgender-owned businesses, and small businesses generally, to compete for HP business. We offer diverse supplier development programs, access to technology solutions, and educational scholarships.

Supplier diversity is mandatory for fulfilling contracts with many government agencies around the world. Increasingly, large enterprise customers also expect HP to demonstrate a commitment to supplier diversity. In 2011, we estimate that more than \$12 billion USD of contracts required HP to demonstrate our efforts in this area.

## Global supplier diversity

We continue to expand our supplier diversity program beyond the United States into Asia, Canada, and Europe. Our work with governments and others establishes appropriate regional definitions of diversity that reflect local society and culture.

In 2011, we maintained our financial sponsorship of the [Canadian Aboriginal and Minority Supplier Council](#) (CAMSC), [WEConnect International](#), and [Minority Supplier Development UK](#) (MSDUK),

and became corporate members of [Minority Supplier Development China](#) (MSD China) and the [Australian Indigenous Minority Supplier Council](#) (AIMSC).

As the program has expanded globally, it has gained more recognition across HP. Employees are using diverse supplier events around the world to engage with customers more regularly.

## Diverse supplier events

HP hosts events with local business councils and participates in regional and national events that introduce diverse suppliers to potential customers. In 2011, HP procurement professionals participated in more than 20 such events in Australia, Canada, China, the United Kingdom, and the United States.

In the United States these included:

- **Business matchmaking** HP collaborated with [SCORE](#), a resource partner with the U.S. Small Business Administration, to sponsor the multicity Business Matchmaking program, offering small businesses the chance to participate in governmental and major corporate procurement opportunities. These events have facilitated more than 75,000 seller-to-buyer meetings.
- **HP Connect** These summits provide several hundred prescreened small and minority- and women-owned businesses the chance to speak face to face with HP commodity managers and targeted HP tier-one suppliers.

In Shanghai, China, HP participated in Increasing the Global Value Chain—Multinational Corporation Perspectives on Going Green and Diversity, presented by WEConnect International. HP staff also convened meetings with the Australian Information Industries Association, which supports government-focused small business programs.

## Supplier development

HP sponsors programs that help diverse suppliers sharpen their business skills; enhance delivery, quality, and service; and compete more effectively in the marketplace.

These include:

- Diverse supplier development** A mentor program designed to foster long-term relationships between HP and select diverse suppliers with whom we are already doing business. The program provides professional guidance and support to the supplier.
- United States Public Sector Mentor-Protégé** The Department of Defense’s program helps small diverse suppliers compete for prime contract and sub-contract awards by partnering with large companies such as HP.
- Entrepreneurship education at Tuck School of Business** HP sponsors diverse entrepreneurs to attend Building a High-Performing Minority Business, focusing on the development and implementation of a customer-focused strategic plan, and Growing the Minority Business to Scale, which focuses on strategies of organic growth, mergers and acquisitions, and strategic alliances.

## HP Tier II Supplier Diversity Reporting Initiative

HP recognizes the influence we have beyond our first-tier suppliers, and we encourage diverse purchasing practices throughout our supply chain. The HP Tier II Supplier Diversity Reporting Initiative requests that our primary suppliers use diverse suppliers when fulfilling their contracts with HP, and report the amount of spending. See table below for more information.

If you are an HP supplier that we have asked to participate in our Tier II Supplier Diversity Reporting Initiative, please [log in here](#).

## Performance

### U.S. Supplier Diversity purchasing results\*, \*\*, \*\*\* [\$ million USD]

	2007	2008	2009	2010	2011
Small businesses [\$ million USD]	\$3,106	\$3,365	\$3,691	\$4,316	\$4,400
Minority-owned businesses [\$ million USD]****				\$827	\$733
Women-owned businesses [\$ million USD]****				\$861	\$476

\* All figures are for U.S. purchases from U.S.-based businesses.

\*\* Data is for the 12-month period ending September 30 of the year noted.

\*\*\* Data beginning in 2009 includes HP Enterprise Services (formerly EDS) spending. Data prior to 2009 does not.

\*\*\*\* HP did not report this metric prior to 2010, so data before that year is not available. Beginning in 2011, we did not allow companies to be counted in both the minority-owned businesses and women-owned businesses categories, which decreased the total amounts compared with the prior year.

## Useful links

### U.S. government websites:

- [Department of Defense](#)
- [General Services Administration](#)
- [NASA](#)
- [Small Business Administration](#)
- [Small Business Administration Pro-Net](#)

### State and local sites:

- [California Small Business and Disabled Veteran Business Enterprise Services](#)

### Business agencies:

- [National Minority Supplier Development Council](#)
- [Women’s Business Enterprise National Council](#)
- [Minority Business Development Agency](#)
- [National Minority Business Council](#)



# Privacy



People rely on information technology (IT) in many aspects of their daily lives. And when they use IT, they expect to maintain their privacy and feel certain their personal information is secure.

Many organizations use sophisticated systems to collect, aggregate, and analyze personal information. These trends emphasize the need for companies to protect privacy while providing any-time, any-place functionality.

This constant use of data makes products and services more personalized, convenient, efficient, and widely available. However, it must occur with people's full awareness and understanding, to avoid fears that their data may be vulnerable to misuse. They question whether social networking, location-aware services, and behavioral profiling and targeting threaten their privacy and safety.

Organizational accountability for handling personal information is critical. HP's privacy strategy is based on transparency and choice. We continue to apply an [accountability approach](#) to privacy in our business and embed the concept of [Privacy by Design](#) in our products and services.

Effective legal frameworks are important, but many privacy laws were created before the widespread use of the Internet and sophisticated tracking technologies. It is often a struggle for regulations to keep pace with emerging technologies. Governments worldwide are taking steps to address this, and we remain heavily involved in shaping these new privacy policies and frameworks. We encourage collaboration between nations and regions to promote relevant, well-defined, and consistent rules.

For more information about our commitment to privacy, read the [HP Global Master Privacy Policy](#).

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## Leading the way in privacy

- HP placed first among technology companies and second overall in the Ponemon Institute's 2011 Most Trusted Companies for Privacy study among U.S. consumers.
- HP's chief privacy officer, Scott Taylor, testified at a hearing on privacy of the U.S. Senate Committee on Commerce, Science, and Transportation.

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## HP employees making an impact: Scott Taylor

As HP's chief privacy officer, Scott Taylor and his team work to ensure the personal data of HP customers remains secure by integrating privacy and data protection into HP's processes, products, and services. Learn more about [Scott Taylor on page 145](#).



# Approach

It is critical that organizations and their employees are held accountable for the way they handle data and the potential risks they may create. HP's approach is to create a chain of accountability for data privacy and security throughout our processes.

HP teams work together to implement and monitor our privacy program. We also collaborate with external partners to improve privacy protection and related regulations worldwide.

## Accountability approach to privacy

The HP Privacy Accountability Framework (see graphic) is a decision-making model that helps our employees assess and manage the risks associated with collecting and handling personal data. This ensures that HP uses transparent practices and meets our customers' expectations. The framework goes beyond legal requirements, also taking into account our company values, ethical considerations, contractual agreements, and local cultures.

The HP Privacy Advisor tool helps employees apply our privacy standards by guiding them through a privacy impact assessment and risk-management process. All employees who collect or use personal information will use the HP Privacy Advisor tool to assess their projects for compliance.

In 2011, more than 99% of permanent employees completed privacy training as part of our required Standards of Business Conduct course. A specific HP Privacy Advisor module has been developed that will be part of the course in 2012.

Employees in functions that routinely handle personal information, such as human resources, marketing, and client services, receive additional privacy training specific to their role.

## Privacy and Data Protection Board

The HP Privacy and Data Protection Board (PDPB) is responsible for privacy risk management at HP. It comprises executives from business units and functions throughout the company. The PDPB is part of our overarching [Ethics and Compliance governance structure](#) and meets quarterly.

The PDPB assesses privacy risks facing HP each year, and then identifies appropriate ways to mitigate these risks. In 2011, the PDPB identified the following four risk areas: cloud computing, data sharing with partners, data deletion and destruction, and data collected by HP products such as PCs and printers. We are addressing the risks related to cloud computing by working with the HP Cloud Services organization to incorporate [Privacy by Design](#) into our cloud offering. We have also added a new PDPB member

## HP Privacy Accountability Framework

### Oversight

Identification of risks and opportunities

Integrated governance model

### Contextual approach

#### Commitment

Solid policies, management commitment, and full transparency

#### Implementation

Mechanisms to ensure policies and commitments are put into effect with employees

#### Validation

Monitoring and assurance that validate coverage and effectiveness of implementation

### Demonstration

**Demonstrate capacity to internal and external stakeholders, and individual data subjects**

Management, Internal Audit, HP Board of Directors, trust agents, regulators, consumers, customers, employees

who represents HP Cloud Services. Deployment of the HP Privacy Advisor tool has helped to mitigate risks arising from data sharing with partners, data collected by HP products, and data deletion and destruction. We have set minimum standards for suppliers handling information on data storage devices returned by HP customers. We audit suppliers to ensure these standards are met.

## Monitoring compliance

HP is one of the first companies to have established an internal audit and assurance program to monitor compliance with our privacy policies, and also do so through third-party certifications, dispute-resolution mechanisms (for example, [TRUSTe](#) and [Better Business Bureau](#)), and customer and employee feedback.

Our Privacy Assurance program assesses internal compliance with our privacy policies and standards, and tracks and mitigates risks and potential noncompliance. The program covers all business units and functions that collect, use, access, or store personal information. In 2011, the Privacy Assurance program received certification from our Internal Audit organization.

All suppliers and third-party vendors who handle HP customer and employee data are contractually bound to comply with the applicable portions of our privacy policies and data security requirements. HP Enterprise Services is responsible for handling clients' personal data and defines our commitments in our client contracts.

Employees and customers can contact our privacy office in more than 30 languages with queries, concerns, or comments. We follow detailed protocols to ensure we handle inquiries and requests effectively, promptly, and appropriately.

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## Privacy and our products and services

We use companywide product development standards to integrate privacy and data protection into our new products and services—a concept known as Privacy by Design. Our business groups also carry out a privacy impact assessment for new products and services in development using the HP Privacy Advisor tool and consultation with the Privacy Office.

Examples of products and services with privacy features include HP Enterprise Security products, whose Security Intelligence and Risk Management (SIRM) platform protects enterprise customers' applications and IT infrastructures from sophisticated cyber attacks.

In addition, scientists at HP Labs continue to work with our Privacy Office to develop new ways to protect privacy, with a focus on data stored in the cloud. Examples of [HP Labs research projects](#) include the long-running [EnCoRe](#) research collaboration into easy ways for people to provide and revoke consent for the use of their personal information, and our Trust Domains research into ways to share data in the cloud while maintaining data confidentiality and integrity.

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## External policy development

New policy frameworks around the world are shifting organizations' legal responsibilities away from simply following rules to demonstrating that they have the capacity to protect privacy and effectively manage risks. HP works closely with regulators, industry, and consumer advocates to contribute to the development of such frameworks.

Though the specific requirements of each framework differ by geography, all are based on well-established and recognized principles such as the Organisation for Economic Co-operation and Development (OECD) privacy principles, so compliance with one makes it easier for organizations to align their practices with the others. This is leading toward greater global interoperability, which benefits organizations and improves consumer protection.

## European Union

We remain one of only a few U.S.-based, multinational companies that have been granted Binding Corporate Rules (BCRs) certification by European data protection authorities. BCRs demonstrate that multinational companies have adequate programs and processes in place to uphold the European Directive for Privacy when transferring data between countries. This reduces the effort needed to comply with national laws within the European Union (EU) and assures consumers that they are dealing with a highly reputable organization.

In 2011, we continued our role as one of the Trusted Advisors to the European Commission and data protection regulators as the region's data protection framework is reviewed. We provided a detailed response to the EU's [public consultation on cloud computing](#), emphasizing the need to streamline data protection rules and build trust in the cloud.

## Asia Pacific

In 2011, the Asia-Pacific Economic Cooperation (APEC) Ministers of Trade endorsed the implementation of the APEC Cross-Border Privacy Rules (CBPR) system to reduce barriers to information flows, enhance consumer privacy, and promote interoperability across regional data privacy regimes. This includes a commitment to implementing the CBPR system as one step toward further opening markets and facilitating regional trade. HP remains actively involved with the implementation of the CBPR system.

## Latin America

We are providing guidance to several Latin American countries as they introduce new privacy regulations. For example, HP has been working with the Ministry of Commerce and business groups in Colombia to contribute to the base law and secondary regulations and provide industry comments. When implemented, this will be the first of a "new generation" of laws that integrates traditional concepts of privacy with innovative new approaches such as binding co-regulatory programs and binding corporate rules. HP has provided similar consultation on the legislative process in Mexico, where new legislation came into effect in 2011.

## Global advocacy

Our Privacy Office has continued to work with international regulators and industry groups through the Center for Information Policy Leadership on a multiyear project to define what it means for a company to be accountable for its privacy practices. The first phase of this work [identified the essential elements](#) of accountability and the second phase [defined ways to measure accountability](#). In 2011, the third phase, sponsored by the Spanish Data Protection Authority, [described the governance model companies should adopt](#) to implement accountability in the marketplace.



HP's people are integral to the company's success. Recruiting, developing, and retaining the best employees provides us with a competitive advantage, so we strive to create supportive, motivating workplaces where everyone can flourish. We foster a culture based on listening, sharing, inspiring, helping, and learning, and we regularly seek feedback on how we can perform better.

Our global workforce of nearly 350,000<sup>1</sup> employees must be able to react and evolve as rapidly as our industry and help us to anticipate future business needs. HP people are innovators and problem solvers, continually seeking new challenges. We support talent development wherever we operate. Investing in people—from a wide variety of diverse backgrounds—creates value for our business, customers, shareholders, local communities, and society at large.

Over the past year, HP has made extensive changes to improve employees' work experience. We also launched a global effort to determine the key behaviors and actions we desire from a cultural perspective, engaging people from across the organization to receive as much input as possible. Based on what we heard, here are a few of the actions we implemented across the company in 2011:

**“HP's success has always been built on its people—they are our legacy and our future. Their talent, spirit, energy, and drive are rivaled only by their potential.”**

—Tracy Keogh, Executive Vice President, Human Resources, HP



#### Work environment

- Tailored core work environment tools and services to meet the needs of distinct employee segments
- Continued to provide enhancements to virtual collaboration suite, especially leveraging social networking functionality



#### Building careers

- Shifted focus to filling job vacancies with internal talent
- Allowed managers greater flexibility in hiring decisions
- Revised redeployment policies to provide better opportunities for people to move between HP roles



#### Rewards and benefits

- Restored base pay to prereduction levels for the vast majority of employees affected by base pay reduction in February 2009
- Increased funding and eligibility for bonuses
- Implemented a new Employee Stock Purchase Plan
- Launched a global wellness program



#### Pride in HP

- Featured employees in the 2011 recruitment campaign showcasing their personal stories
- Reaffirmed HP's commitment to volunteerism, including by raising awareness that every HP employee may take 4 hours of company time per month to volunteer

<sup>1</sup> As of October 31, 2011.

## Employment policies

Our global employment policies reflect our commitment to treat all employees fairly and to promote a culture of integrity and ethical decision-making everywhere we operate. Our policies often set a more demanding standard than local laws or customs require.

Our [Standards of Business Conduct \(SBC\)](#) is a resource for employees and all those who represent HP. The SBC is based on our shared values and represents the highest level of guidance.

Our Best Work Environment Policy defines the standards of personal conduct that we expect employees to meet to contribute to a positive, productive work environment.

Our [nondiscrimination policy](#) outlines how we aim to maintain a work environment free from discrimination.

Our [harassment-free work environment policy](#) describes how we strive to achieve an environment where customers, employees, suppliers, business partners, visitors, and shareowners are treated with dignity, respect, and courtesy.

Our [global citizenship policy](#) lays out our company values of trust and respect for the individual and conducting our business with uncompromising integrity.

Our [Open Door Policy](#) reflects our commitment to open communications and a workplace where each person's voice is heard.

Our [Global Human Rights Policy](#) commits us to fair treatment of all employees wherever we operate, and to promote human rights throughout our business.

We provide employees with the ability to [report policy violations anonymously](#), and we fully investigate all issues raised.

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# Engaging our people

**“Everybody is connected through HP’s many collaborative avenues. These connections promote an integrated global workforce, which has taught me several key lessons that I now want to share with other employees.”**

—Leo Chan, Planning and Operations Lead, Asia Pacific and Japan  
Human Resources Global Operations, HP

An engaged workforce strengthens company performance. Employees who are invested in HP’s success are more likely to perform well, promote our brand, and stay with HP. They also enhance the quality of the relationships we build with our customers, communities, and other stakeholders.

Employee engagement begins with a culture that is open and collaborative. At every level of the organization we are committed to fostering a level of openness and equality that is changing our culture for the better. At company headquarters in Palo Alto, California, United States, for instance, we have taken down the walls of the executive offices in favor of an open-plan arrangement.

We strive to engage people at all points, from the application and hiring process to training and developing employees to maintaining relationships with retirees after they leave HP. We aim to approach

every interaction with honesty and respect, treating everyone we encounter with absolute integrity. Relationships are at the core of what we do. We collaborate with people inside and outside of the company, gathering insights and ideas that improve the way we do business and serve our customers.

One critical component of engagement is to continually connect to our people—we provide numerous forums and networks, collect and respond to employee feedback, provide opportunities for community involvement, and offer a range of [recognition programs](#).

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## Forums and networks

Our employees often work across time zones and continents, so virtual collaboration is essential.

Our people exchange ideas and views, and collaborate on better ways of working, through online and in-person forums, as well as [Employee Resource Groups \(ERGs\)](#). The first ERG was formed more than 30 years ago and now there are more than 120 ERGs across 30 countries.

Another employee group is the HP Sustainability Network, which helps employees learn about and share environmental practices that can benefit the company and the planet. It includes 36 chapters worldwide with thousands of members. Learn more in [Employee engagement on page 23](#).

Social media plays an increasingly important role in engaging employees. Many employees use WaterCooler, an internal business social networking platform, to stay connected and expand their networks. HP Connections, another social networking platform, specifically supports conversations about products and sales-related topics.

## Employee feedback

HP gathers employee feedback through formal and informal channels. One of the most important is the annual Voice of the Workforce (VoW) global survey, which provides an opportunity for individual employees to influence the company as a whole. We expanded the VoW in 2011 to measure employees' perceptions of HP's identity in the marketplace, training and development opportunities, and the connection between individuals' and HP's corporate objectives. During the year, 78% of all employees took part in the confidential VoW survey, available online in 26 languages. This compared with 75% in 2010.

HP managers use VoW survey results to better understand employees' perceptions of their experiences at work by identifying favorable aspects of the environment and areas for improvement. Results also help measure the impact of employee-related programs, thereby providing critical feedback for ongoing improvements.

Following the VoW survey each year, leaders across the company launch systematic action planning processes. Follow-up actions are implemented at many levels in the organization: HP-wide, at the business unit level, and within business groups. VoW actions for 2011 included development of a manager excellence training program, improvements in the physical work environment, and changes in technical support for employees.

The 2011 survey indicated that areas of strength include teamwork, the relationship between employees and their immediate managers, and integrity and ethical practices at all levels of the company. More specifically, employees felt the company performed best on treating employees fairly, managers speaking openly and honestly even when the news is bad, and managers clearly communicating ethical expectations.

Opportunities for improvement included management's ability to communicate a clear sense of direction, and employees feeling they do not receive enough support to drive innovation. We are working to address these issues.

Since the survey was conducted, our new chief executive officer (CEO), Meg Whitman, has communicated a clear and succinct strategy, along with corporate priorities for 2012. A chief communications officer, reporting directly to the CEO, has also been appointed, with oversight of employee communications.

Regarding innovation, the CEO has publicly announced an intent to boost research and development spending while limiting the size of acquisitions.

In addition to the VoW survey, HP regularly carries out targeted surveys to seek employee feedback on specific programs or issues. For example, the staffing organization routinely surveys employees recruited into new roles from inside or outside of the company on the quality and effectiveness of the recruiting and onboarding process.

## Open dialogue with leadership

Employees can ask questions of HP leaders and review answers to common queries through the HP intranet Top of Mind feature, as well as in all-employee meetings. Topics addressed in Top of Mind relate to HP's business and strategy—issues of interest to the global employee population. Employees can pose questions using an online form or by making a video submission.

Most leaders also meet regularly in town halls or coffee talks to share information and respond directly to employee questions. Recurring intranet features including Top of Mind and CEO Perspective offer frequent opportunities for top executives to communicate to the company and receive feedback.

## Employee volunteerism and giving

HP people contribute their time, skills, and expertise to their communities and also support our global social innovation programs. Many employees also make financial contributions to support their local communities and assist in disaster relief efforts.

In 2011, HP employees and retirees donated more than 744,000 hours to volunteer projects. That time spent giving back to communities is valued at nearly \$26 million USD.<sup>1</sup>

In 2011, HP employees in the United States donated cash totaling approximately \$3.8 million USD, matched by \$3.1 million USD from the Hewlett-Packard Company Foundation.<sup>2</sup> Since 2007, HP and employees have donated \$30 million USD through the program. In addition, U.S. employees can donate HP technology to qualified charitable organizations or schools. For more information, see [Employee volunteerism and giving on page 152](#).

## Retiree engagement

Our approximately 85,000 retirees are important ambassadors for HP. We stay connected with them through communications, [social networking](#), and the [HP retiree website](#). In addition, HP plays an active role in the HP Retiree Advisory Board and contributes content to [local retiree clubs](#) across the globe.

<sup>1</sup> Value based on type of volunteering: \$150 USD per hour for board, service corp, pro bono, and skill-based; \$20 USD per hour for hands-on. Uncategorized hours are not reflected in this total.

<sup>2</sup> The Hewlett-Packard Company Foundation will match up to \$4 million USD in aggregate annually.



# Building careers

**“To be successful in a multinational corporation with a broad portfolio of offerings, you need to gain broad experience across the organization. HP has given me opportunities to grow in this area, and the rewards have been multifold.”**

—Kelly Tan, Managing Director and Vice President of Global Sales, HP Singapore

HP has a longstanding commitment to recruit, retain, and develop the most skilled employees in our industry. Fostering the best talent relies on providing extensive opportunities for continual learning and growth. This takes place through activities including training, mentoring, and leadership development.

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## Recruiting talent

We increasingly use social media to connect with potential recruits, communicate our values, and show our commitment to global citizenship—important criteria for many jobseekers. Our HP Careers presence on Facebook, Twitter, and LinkedIn features content about our culture and commitment to social innovation. Our YouTube page includes brand and wellness videos to educate candidates about HP’s accomplishments and employee benefits.

In 2011, 13% of our hires came from universities, so university recruitment is important to HP. Each year our businesses establish targets to hire interns and university graduates, from a wide range of backgrounds. They receive extensive training in many aspects of our company and operations, and we make sure that they get to know senior managers and build up a network of peers in their chosen field.

During 2011, we increased our focus on developing internal talent and promoting from within at all levels of the organization, as well as on building a stronger leadership pipeline.

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## Learning and development

HP offers all employees the opportunities and resources to excel in their jobs and prepare for new challenges. Our global presence and networked workforce allow employees to learn from each other in many different ways and across a wide spectrum of specialties.

We provide development opportunities through face-to-face training, live virtual training, and self-directed online courses. The vast majority of our training courses (93%) are delivered in virtual sessions or self-paced online modules. These can reach more employees and allow flexible access for people to learn anywhere and anytime. We offer more than 10,000 courses, which employees used a total of 2.5 million times during 2011, a 56% increase from 2010.

In 2011, we aligned our learning investment to business priorities with increased focus on engineering and technology:

- Technical: 68%
- Sales: 21%
- Professional skills: 7%
- Leadership: 4%

Employees also attend conferences, seminars, and training at accredited institutions, often receiving technical certifications.

We continually assess how we can raise awareness of, and provide access to, the most relevant learning and development opportunities. Between 2009 and 2011, the percentage of respondents to our Voice of the Workforce survey who replied that the learning opportunities they need are available to them increased by 10 percentage points.

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## HP employees making an impact: Shelley Jeffcoat

Shelley Jeffcoat’s experience mentoring a struggling co-worker helped her realize other HP employees could benefit from the same kind of support. So she set out to create a peer-mentoring program for her department that’s since grown into a sitewide initiative. [Learn more about Shelley Jeffcoat on page 139.](#)

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## Learning communities

Employees may opt to join more than 30 learning and professional communities at HP to meet and interact with colleagues. Using virtual platforms, they can participate in training, share experiences, and gain access to tools, presentations, podcasts, and videos. Topics include everything from global sales development to technical career paths.



## Mentoring

One of the best professional development resources available to HP employees is the skills and expertise of their co-workers.

HP facilitates mentoring experiences through the Mentoring @ hp intranet site, which contains advice and resources for both mentors and those seeking mentors. In addition, the site provides a directory of mentoring programs, which helps connect groups as diverse as young employees, senior women leaders, and professionals in finance, human resources, and sales with mentors in their fields. In 2011, more than 4,500 employees participated in HP's formal mentoring programs.

## Opportunities to broaden experience

In 2011, we ran the Global Career Development Connection, a companywide online event through which employees could find tips on how to build their HP professional network, learn about opportunities in other business units or functions, or just visit to get ideas and inspiration. The event also provided an opportunity for employees from all regions to chat live with human resources representatives across the enterprise about how to develop their careers. The event received a citation in the American Society for Training & Development's 2011 BEST Awards, which recognize excellence in workplace learning and performance.

To supplement formal training, "learning by doing" builds skills and accelerates development. We encourage employees to pursue hands-on experience through work-based learning opportunities such as job rotations or new opportunities across business groups, regions, and functional areas.

## Leadership development

The ability to think and act as a leader is crucial for every HP employee, regardless of role. All employees have the opportunity to complete a self-assessment against the HP leadership standards and develop leadership skills through performance feedback, learning and training resources, or working with a coach or mentor.

HP's Executive and Leadership Development team designs and implements leadership and management training for leaders at all levels. In 2011, we increased the scale and reach of training. During the year, 7,500 employees participated in various leadership training sessions, including the HP Key Talent and Executive Leadership Excellence programs. Focus areas addressed business challenges, strategic thinking and planning, financial acumen, and team leadership.

Leaders developing leaders continues to be part of our strategic approach. In 2011, approximately 400 HP leaders directly supported our leadership development programs and more than 12,000 employees attended our monthly Leading Ideas webcast

series, during which senior leaders provide insights on leadership topics, share helpful tips and best practices, and link to resources for HP employees.

Also in 2011, HP launched Leadership Development Central (LDC) as a resource to search and source opportunities for self and team development. LDC rapidly rose to the top 10 list of sites on the @HP employee portal. The new Leadership Learning in a Box series is the most recent addition to LDC through which team leaders conduct 1-hour discussion sessions focusing on skill building and managing and motivating teams.

We also help leaders enhance their skills while supporting social innovation initiatives in communities. In 2011, as part of HP's intensive Key Talent program, individual teams of 5 or 6 HP vice presidents brought their expertise and knowledge to 10 San Francisco Bay Area nonprofits in a 12-week social impact business challenge. They provided pro bono recommendations to address the organizations' most significant business challenges. Leaders also worked with the Global Health Corps (see below).

## Collaboration with Global Health Corps

During 2011, HP partnered with the Global Health Corps to launch a pilot advisory program under which HP executives cross borders and cultures to mentor the next generation of health leaders. Advisors from HP offices in 12 countries were matched with a Global Health Corps Fellow and worked on healthcare-related projects including supply chain data analysis and pharmaceutical/medical consumable forecasting in Rwanda, helping to define and evaluate requirements for an e-learning platform for clinical training materials in Uganda, and creating case management plans and illness prevention education strategies for homeless teens in the United States.

## Redeployment

Redeployment increases the workforce's ability to adapt, helps HP maximize and develop talent, and aids in responding to employees when ongoing business decisions such as restructuring and realignment impact their positions. Redeployment provides HP with the alternative to deploy talent instead of reducing the workforce.

The redeployment program allows managers to match the competencies and skills of eligible employees with current job openings. Reassigning eligible employees to open positions within the company helps HP retain internal talent and gives employees the opportunity to apply their skills to other HP jobs. In 2011, HP proactively managed redeployment of employees impacted by divestiture decisions (such as Halo and Palm). One of the program changes adopted in 2011 supported redeployment by helping to position employees for internal job opportunities and accommodated earlier employee engagement with our career-transition supplier.

We also revised the redeployment and rehire policy to be more open, giving managers greater flexibility in hiring decisions and in facilitating employee job rotation.

# Diversity and inclusion

Diversity and inclusion are key drivers of creativity, innovation, and invention. Worldwide, HP is putting our diversity to work to connect people to the power of technology in the marketplace, workplace, and community. We are committed to building an inclusive workplace where all employees can contribute and be successful.



A workforce that includes men and women from different nations, cultures, ethnic groups, generations, and backgrounds, with a wide range of skills and abilities, helps us to understand and reflect our customers' values and demographics. A diverse workforce is also vital to attracting and retaining the best employees.

During 2011, we:

- Held four "diverse talent" summits in the Americas, Asia Pacific, and Europe, at which more than 400 high-performing diverse employees learned about leadership and business strategy
- Added sexual reassignment surgery benefits to a number of our U.S. healthcare plans (coverage beginning in 2012)
- Added a provision to reimburse or "gross up" any U.S. income taxes that apply based on coverage for domestic partners and domestic partners' children
- Delivered more than 150 Employee Resource Group (see below) events that provided members with experiential leadership development opportunities

## Policies

Our diversity and inclusion policies and practices help foster a positive work environment at HP. We expect and require every employee to treat others with dignity, respect, and courtesy. We do not, under any circumstances, tolerate discrimination or harassment. We comply with diversity laws as basic minimum requirements, and our policies often set a higher standard than is legally required.

We encourage employees to report suspected discrimination or harassment by contacting local human resources departments or using our confidential and anonymous 24-hour GuideLine. In Canada and the United States, the GuideLine number is 1-800-424-2965. For employees outside of North America, we publish numbers on our intranet.

Our chief diversity officer is responsible for compliance with these policies. Our vice president and chief ethics and compliance officer is responsible for the GuideLine.

## Working with diversity organizations

HP has developed strategic partnerships with a number of organizations whose missions align with HP's strategy of developing a diverse workforce and creating an inclusive work environment.

HP is a sponsor of [Catalyst](#), a leading nonprofit organization that works with businesses to build inclusive workplaces and expand opportunities for women. HP has access to Catalyst's global database of research, which we use to inform and support our diversity and inclusion priorities. We also participate in Catalyst's annual awards dinner and attend many local events.

HP has been a sponsor of Out & Equal Workplace Advocates' Workplace Summit for more than 10 years. [Out & Equal](#) is a nonprofit organization dedicated to achieving workplace equality for lesbian, gay, bisexual, and transgender employees and professionals. At the summit, HP employees present workshops, demonstrate HP products, and talk about job opportunities at HP.

A few of our many partners in our diversity and inclusion efforts include Anita Borg Institute, GettingHired, Leadership Education for Asian Pacifics, Inc., National Action Council for Minorities in Engineering, Professional Business Women of California, and Simmons Women's Leadership Conference.

## Internal development opportunities

In 2011, we sponsored leadership summits for employees around the world with a broad focus on women and ethnic groups. These summits help to build global business and leadership capabilities, and demonstrate HP's commitment to grow and develop high-performing diverse talent. These events also provide opportunities to connect HP leaders with employees from diverse backgrounds, fostering an inclusive work environment.

## HP employees making an impact: Chantal Martineau-Kirse

Chantal Martineau-Kirse founded and coordinates the HP Women's Network in Munich, Germany. The group promotes the professional development, visibility, and retention of women at HP Germany. [Learn more about Chantal Martineau-Kirse on page 141.](#)

## Employee Resource Groups

Our Employee Resource Groups bring together employees with common interests and backgrounds. HP has more than 120 such groups worldwide, representing aspects of diversity such as gender, ethnicity or national origin, sexual orientation, age, and disability.

For additional information, see [Diversity and inclusion on page 125](#).

## Performance

We track gender diversity globally and ethnic diversity in our U.S. workforce. The charts below detail our performance over the past 5 years.

In 2011, 23.9% of our top U.S. executives (director level and above) were women, up from 23.3% in 2010. In the United States, minorities constituted 13.4% of our top U.S. executives, down slightly from 13.7% in 2010.

We also promote diversity in our supplier base. See [Supplier diversity on page 115](#) for detail.

### Worldwide workforce demographics, 2007–2011 [women as a percentage of total employees]\*

Region	2007	2008	2009	2010	2011
Americas—employees	31.0%	30.8%	35.0%	34.3%	33.3%
Americas—managers	25.3%	25.2%	28.3%	27.8%	28.7%
Asia Pacific and Japan—employees	30.0%	30.9%	32.5%	33.1%	32.3%
Asia Pacific and Japan—managers	18.6%	20.2%	21.2%	21.8%	22.3%
Europe, Middle East, and Africa—employees	28.4%	28.1%	30.0%	30.5%	29.8%
Europe, Middle East, and Africa—managers	17.6%	18.5%	20.0%	19.8%	20.9%
Worldwide—employees	30.0%	30.1%	32.9%	32.9%	32.0%
Worldwide—managers	21.5%	22.0%	24.3%	24.1%	24.8%

\* 2009 data excludes Brazil.

### Global new hires, 2007–2011 [as a percentage of total]\*, \*\*

Region	2007	2008	2009	2010	2011
Female	31.8%	34.9%	35.6%	35.2%	32.7%
Male	68.2%	65.1%	64.4%	64.8%	67.3%

\* 2009 data excludes Brazil.

\*\* 2009 data reflects the time period January 1 to November 30, 2009.

## 2011 U.S. workforce demographics [as a percentage of total]

Male	Female	White	All minorities	Black	Hispanic	Asian	Native Hawaiian or other Pacific Islander	Two or more races	Native American	Total
<b>Officials and managers</b>										
71.67%	28.33%	80.81%	19.19%	3.60%	4.53%	10.47%	0.01%	0.22%	0.36%	<b>11.25%</b>
<b>Professionals</b>										
68.10%	31.90%	73.14%	26.86%	5.02%	4.96%	15.87%	0.08%	0.46%	0.47%	<b>71.48%</b>
<b>Technicians</b>										
78.91%	21.09%	69.02%	30.98%	14.57%	7.13%	7.19%	0.29%	1.08%	0.71%	<b>9.82%</b>
<b>Sales workers</b>										
50.99	49.01%	68.57%	31.43%	7.38%	15.60%	4.72%	0.23%	3.12%	0.38%	<b>1.44%</b>
<b>Office and clerical</b>										
16.52%	83.48%	62.54%	37.46%	19.80%	8.35%	7.27%	0.31%	1.00%	0.73%	<b>5.25%</b>
<b>Operatives (semi-skilled)</b>										
43.46%	56.54%	57.59%	42.41%	13.61%	12.57%	14.66%	0.52%	0.52%	0.52%	<b>0.21%</b>
<b>Laborers</b>										
49.21%	50.79%	41.87%	58.13%	15.87%	24.42%	17.06%	0.00%	0.20%	0.60%	<b>0.55%</b>
<b>Total</b>										
<b>66.60%</b>	<b>33.40%</b>	<b>72.77%</b>	<b>27.23%</b>	<b>6.69%</b>	<b>5.58%</b>	<b>13.80%</b>	<b>0.11%</b>	<b>0.56%</b>	<b>0.49%</b>	<b>100.00%</b>

## U.S. new hires, 2007–2011 [as a percentage of total]\*

	2007	2008	2009	2010	2011
White	69.0%	67.2%	65.0%	61.7%	52.4%
All minorities	30.1%	32.4%	34.5%	34.8%	31.1%
Black	6.8%	8.1%	11.2%	14.5%	7.7%
Hispanic	6.3%	6.9%	7.1%	7.1%	6.7%
Asian	16.5%	15.7%	12.5%	10.5%	14.6%
Native American	0.5%	0.6%	0.7%	0.3%	0.4%

\* Sum of "White" and "All minorities" does not equal 100% and the sum of "Black," "Hispanic," "Asian," and "Native American" does not equal the total for "All minorities" due to people who do not declare or who do not fall into these categories. "White" and "Black" figures for 2011 are markedly lower from previous years, as 16.1% of respondents placed themselves in a new "Other" category, which does not allow identification by ethnicity.

# Rewards and benefits

HP demonstrates our commitment to our people by acknowledging and rewarding them for their work through our compensation, benefits, and recognition programs.

## Compensation

After several years of tough business conditions, during 2011 we brought base pay back to prereduction levels for the vast majority of employees affected by pay cuts in 2009. We also reintroduced the Employee Stock Purchase Plan, enabling employees to buy HP shares at a 5% discount.

Nevertheless, our 2011 Voice of the Workforce survey indicated that many employees feel HP can do a better job of recognizing and rewarding their hard work and commitment to the company—and

that the company should be more transparent about bonuses and raises. We are exploring ways to address these issues in 2012, such as more clearly articulating the company's compensation strategy.

The issue of senior executive compensation is attracting increasing interest, including from our shareholders. In March 2011, shareholders voted against proposed executive compensation packages at HP's annual meeting. Although the vote was nonbinding, HP has carefully considered shareholders' perspectives on compensation. Our new president and chief executive officer, Meg Whitman, who took up her position in September 2011, has a fixed annual salary of \$1 USD and works under the same open-ended contract as all employees. Her nonsalary compensation is tied to company performance and will be paid via shares of HP stock, not cash.

Senior executive remuneration is based not only on financial targets but also on factors such as business objectives, customer satisfaction, and people development (including issues such as career development, employee engagement, and succession planning).

## Benefits

In addition to base and performance-related pay and stock ownership, we offer benefits everywhere we operate. These are designed to support a wide range of employee needs, varying by country, and may include:

- Health and wellness plans supporting employee well-being
- Income protection insurance covering risks from injury or illness
- Retirement and savings plans helping employees secure their financial future
- Time-off programs to pursue interests outside of work

We are continually adapting benefit programs, and we've made numerous improvements during the past year designed to better support employee and business needs, while making benefits more relevant to our employees. Some examples include:

- Expanded wellness and maternity care benefits in several countries
- Health benefit improvements in countries such as Colombia and India

- New benefit options with expanded flexibility in several countries throughout the Europe, Middle East, and Africa region
- Expanded parental leave and backup childcare benefits for U.S. employees

For more details, visit the [HP Benefits](#) website.

## Recognition programs

Appreciating employees' efforts and achievements at all levels has always been important at HP. We acknowledge employee accomplishments through Recognition @ HP, a program that promotes appreciation for good work. Focus areas include leadership, innovative thinking, and service excellence.

Instant Appreciation e-cards, which enable any employee to acknowledge the contributions of others, are a powerful recognition tool introduced in 2011. Employees can choose from 11 card designs that express a variety of sentiments and include space to describe what the person did to help create a great result for HP. The sender may also opt to send the recipient's manager a copy to ensure they are aware of the employee's contribution.

# Wellness

**"I believe that having family and friends and a work-life balance makes you a better performer."**

—Serena Yong, General Manager, Personal Systems Group, HP Singapore

When employees feel well, they perform well. So HP strives to support our people at all levels of health and fitness. Our wellness programs vary by country, but all support employees' physical health, financial well-being, and stress management. We strive to increase employees' awareness about health issues and support healthier lifestyles.

Our 2011 [Voice of the Workforce \(VoW\) survey](#) found that 79% of HP employees felt their managers take a genuine interest in their wellness, compared with 76% in 2010.

Reflecting our strength in this area, HP was named a 2011 Best Employers for Healthy Lifestyles winner by the Washington, D.C.-based National Business Group on Health.



In 2011, HP refreshed 30 HP fitness centers in 12 countries.



## Maintaining work-life balance

We offer programs to help our employees manage personal and work commitments, as the fast pace of our industry can be demanding. In many countries, these include concierge services, backup childcare services, and stress-management resources.

Our annual VoW global survey showed that flexible work arrangements are one of the features of the HP work environment that employees value most. These arrangements include:

- **Flex time** Working a normal 8-hour workday, but adjusting start and finish times
- **Part time** Working reduced hours on an ongoing or temporary basis; about 2% of employees work part time
- **Telework** Working full time from home
- **Flexwork** Occasionally working from home, but primarily based on HP premises

Additional programs that help employees improve work-life balance vary by country, including:

- Adoption resources and assistance
- Dependent care resources
- Education resources
- Family and medical leave
- New parent leave
- Vacation and paid time off

For additional details about work-life programs, see [HP Benefits](#).

## Wellness Ambassador Network

More than 250 Global Wellness Ambassadors promote HP wellness initiatives locally and help raise employee awareness of our programs. They plan events and work with local company leadership to integrate health, financial, physical, stress management, and other well-being strategies into daily employee routines and special activities. Wellness ambassadors get together to plan site-specific events and also meet virtually as a group to share best practices.

## Wellness program

During 2011, we rolled out our wellness program, initially launched in the United States, to 32 other countries. It now covers about 90% of employees. Wellness programs outside the United States are customized to local needs, but they generally feature activities, challenges, and contests to increase employee involvement in this area.

## Winning with Wellness Hero

New in 2011, we invited employees to nominate colleagues they regard as wellness heroes. The Winning with Wellness Hero initiative attracted hundreds of nominations, from which six were selected as particularly inspiring. Among them was Sushil Sharma in Bangalore, India, who started a Back on Track program that provides his co-workers with daily fitness and diet tips, encourages them to take the stairs instead of the elevator, and urges them to exercise for at least 30 minutes a day.

## Other initiatives

Additional wellness initiatives during 2011 included the following:

- We refreshed 30 HP fitness centers in 12 countries with remodeling and/or new equipment. We also built two new centers at HP facilities in Plano and Houston, Texas, United States, bringing the total number of fitness facilities to 48 in 13 countries.
- We opened three new on-site health centers in Palo Alto, California, and Plano and Houston, Texas, United States. HP opened three on-site clinics in Bangalore, India, in early 2012.
- In the United States, we improved our Backup Child and Adult/Elder Care Program by expanding care from 5 days to 10 days per calendar year and by eliminating a copay to allow care at no cost to the employee. We promoted these program changes as part of the overall wellness initiative. This helped increase awareness and program adoption. Usage between 2010 and 2011 rose, on average, from 70 to more than 400 instances per month. We also expanded our paid Parental Leave Program from 3 to 5 paid leave days.
- As part of a cancer awareness pilot, 46 sites in 7 countries held mammography and cancer screening sessions. Sixty thousand employees registered as part of a separate Power of Pink initiative to help increase awareness of breast cancer.

## Global Wellness Challenge

In 2011, we launched a Global Wellness Challenge to all employees, inviting them to take on challenges related to walking and exercising more. Almost 54,000 employees in approximately 90 countries participated, with many saying the challenges had changed their lives for the better. “I have lost more than 20 pounds and regained confidence,” said one employee. “I now feel good about myself, and I have also been able to motivate my family to have a healthier lifestyle. The program has been priceless. It will benefit me for the rest of my life and for that I will forever be grateful.”

Participants walked or ran more than 4.5 million miles collectively between May and August. Together, they clocked more than 58 million minutes of exercise—about 110 years. The vast majority of those who took part (94%) were satisfied with the experience. For more information, [watch our video on YouTube](#).

## Employee photos



### Hong Kong

Dennis A. participating in the King of the Hills Time Trial race in Hong Kong.



### Georgia, United States

Sue B. “upping her game” at the Tough Mudder, Georgia, United States, a 12-mile run through woods and on a motocross track with 20 challenging obstacles.



Pam K., left, and HP colleague Veronica F. trained in Frisco, Colorado, United States, negotiating 23 arduous miles in a day.



### Lanzarote, Canary Islands, Spain

Nacho P. at his first Ironman Triathlon in Lanzarote, Canary Islands.



### Beishi River, New Taipei City, Taiwan

Tony L. kayaking down the Beishi River.



### Reading, United Kingdom

Tony S. at the English Standard Distance Triathlon Championships in preparation for the Reading, United Kingdom, Olympic Distance Triathlon.



### Florianopolis, Brazil

Marcus Z. in a 150-km relay marathon called the “Volta da Ilha” or “around the island.”



### London–Brighton, United Kingdom

Steve J. participating in the 54-mile Bike Ride for the British Heart Foundation from London to Brighton, United Kingdom.



### Chennai, India

HP team exercising.

# Health and safety

Providing health and safety programs that support HP's employees is one of our key commitments. We take seriously our responsibility to provide a safe working environment at our facilities and offices. This reflects our values and also makes good business sense. Employees are most productive when they are healthy—and the disruption caused by lost workdays costs us time and money. Slips, trips, and falls, as well as manual materials handling and office ergonomic incidents, are the leading causes of lost workdays at HP. We tailor our health and safety programs to try to minimize such incidents.

During 2011, we increased our focus on health and safety at non-HP business locations, as an increasing number of employees spend time working from home or at customer locations. We redesigned, updated, and expanded our self-paced health and safety training courses to better reflect those employees' needs. We also emphasized the different groups of employees for which the course is applicable.

Our health and safety programs are part of a comprehensive [environmental, health, and safety \(EHS\) management system](#) that meets or exceeds applicable regulatory requirements globally. This system aligns with the internationally recognized Occupational Health and Safety Assessment Series (OHSAS) standard OHSAS 18001 as well as the American National Standards Institute's (ANSI) ANSI Z10 and the International Labour Organization's (ILO) ILO-OSH 2001 standards. Six HP sites in Ireland, Romania, Scotland, Singapore, South Africa, and the United States are registered to OHSAS 18001.

Our health and safety data collection and tracking system, which monitors injury trends at the site and corporate level, adheres to the ILO Code of Practice on Recording and Notification of Occupational Accidents and Diseases.

Increasingly, the EHS organization is asked to provide information in support of our sales, service, and contract teams responding to customer requests and completing new sales bids, implementing service agreements, and renewing contracts.

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## Communications

During 2011, we upgraded our EHS intranet site, which, among other things, provides instructions on safe chemical handling, advice about health while traveling, and hints on how to audit sites for health and safety risks. As part of the website update, we created a video for employees that explains the role of the EHS organization at HP, providing examples of the wide range of health and safety issues at the company, and emphasizing the importance

of topics such as hearing protection, safe lifting practices, chemical containment, and the proper use of forklifts. It also features interviews with managers about how they address health and safety issues in their work settings and how EHS supports their businesses.

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## Training

We emphasize health and safety from the first day of employment at HP. We provide employees with an overview of our policies and advice on preventing and responding to workplace injuries. Employees take a required online refresher course annually, and we offer many of our training courses in multiple languages.

Our [HP Safety and Comfort Guide](#), which offers training on ergonomics, is available to all employees and can be accessed by customers and employees on HP's external website, where the guide is posted in 35 languages. Our online risk-assessment tool offers ways to assess office ergonomic risks and provides recommendations to reduce those risks.

We also tailor training to specific jobs and provide courses to reduce risks in various work environments, including office, laboratory, and warehouse settings. Ergonomics training focuses on reducing the risk of injuries and illnesses related to materials handling and day-to-day office work.

During 2011, we worked to publicize the online training and risk-assessment tool that helps members of our increasingly mobile workforce evaluate their home offices, shared or dedicated work spaces, and customer locations. We initially focused on employees in countries where this type of training, risk assessment, and risk mitigation is required by law.

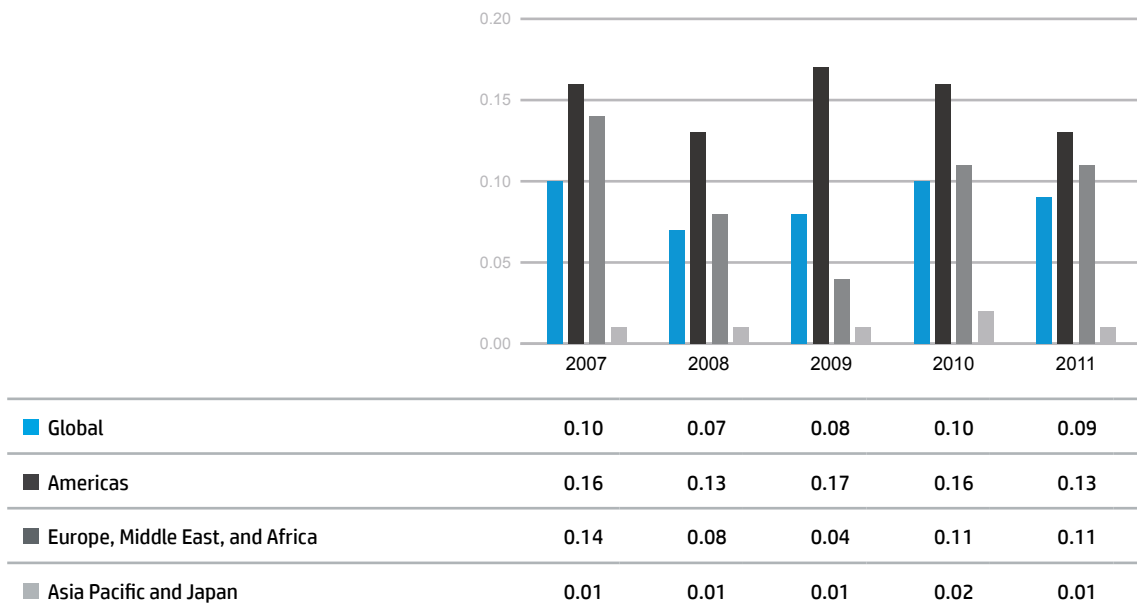
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## Performance

Our primary performance metrics for work-related injuries are the following:

- Lost workday case rate, which describes the number of work-related injuries that result in time away from work per 100 employees working a full year.
- Recordable incidence rate, which describes the number of incidents requiring medical attention beyond first aid, whether or not they incur lost time, per 100 employees working a full year.

## Lost workday case rate, 2007–2011\*



\* Lost workday case rate is the number of work-related injuries that result in time away from work per 100 employees working a full year. The U.S. industry average in 2009 was 0.3. (2010 data did not include the North American Industry Classification System code used in previous years. Thus, 2009 data was used because it was the most recent available.) Americas includes incidents occurring in Argentina, Brazil, Canada, Panama, Puerto Rico, and the United States. Europe, Middle East, and Africa includes incidents occurring in Belgium, France, Germany, Israel, Italy, Morocco, Netherlands, Poland, Spain, and the United Kingdom. Asia Pacific and Japan includes incidents occurring in Japan and Singapore.

The lost workday case rate decreased in 2011 compared with 2010 in all regions except Asia Pacific and Japan, where it remained unchanged. Slips, trips, and falls continues to be the leading category for lost workday incidents. A health advisory notice on preventing such incidents is posted on the EHS website, and we recently communicated health and safety practices that can help minimize these risks to all employees worldwide. This effort also targeted risks associated with materials and equipment handling, as well as ergonomic factors in the office environment. We posted a health advisory notice during 2011 on safe practices for manually handling materials or equipment, with a link to a back safety course. Our regional office ergonomic websites link to tools that help employees identify, minimize, or eliminate office ergonomic risks.

## Leading causes of lost workdays, 2011

Slips, trips, and falls	40%
Ergonomics—materials handling	20%
Ergonomics—office environment	12%
Automobile accidents	11%
Struck by/against/cut by	6%
Other	11%

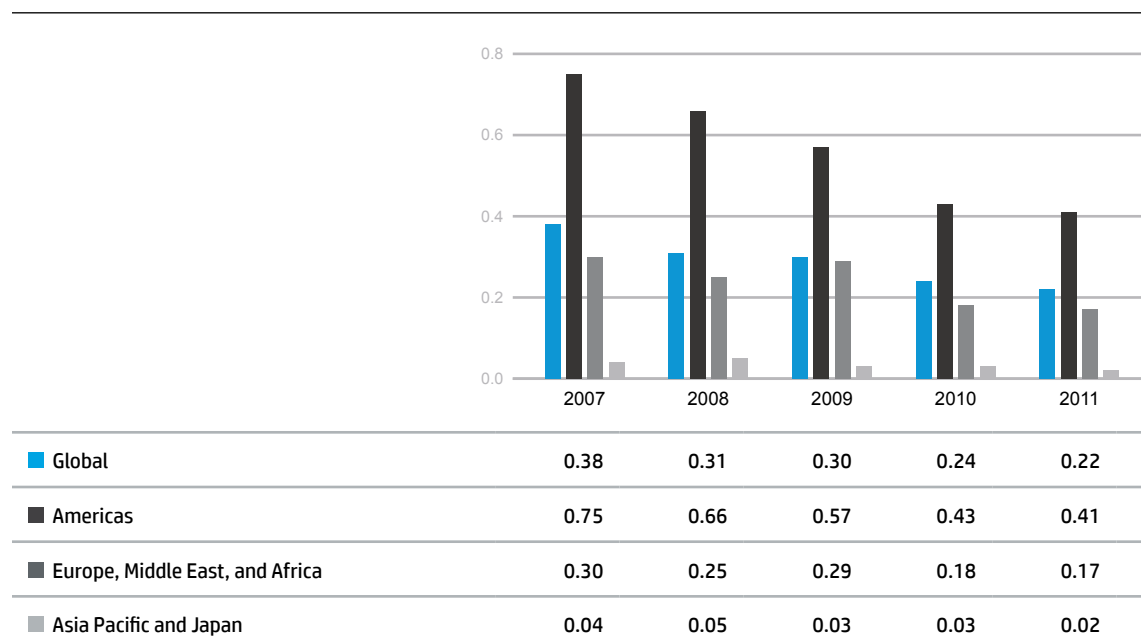
The proportion of lost workdays caused by slips, trips, and falls was the same in 2011 as in 2010, but the proportion caused by ergonomics—materials handling rose from 12% to 20%. As noted above, we have taken measures to attempt to address this situation.

## Location of lost workdays, 2011

HP sites	50%
Customer sites	27%
Business travel	15%
Telecommuting/home office	5%
Events/team building	3%

Incidents at customer sites and during business travel increased in 2011 compared with 2010 (from 20% and 9%, respectively), so we have extended a health and safety course that was previously targeted only at customer engineers to also cover other employees.

## Recordable incidence rate, 2007–2011\*



\* Recordable incidence rate is the number of all work-related lost-time and no-lost-time cases requiring more than first aid per 100 employees working a full year. The U.S. industry average in 2009 was 0.5. (2010 data did not include the North American Industry Classification System code used in previous years. Thus, 2009 data was used because it was the most recent available.) Americas includes incidents occurring in Argentina, Brazil, Canada, Mexico, Panama, Puerto Rico, the United States, and Venezuela. Europe, Middle East, and Africa includes incidents occurring in Belgium, France, Germany, Ireland, Israel, Italy, Morocco, Netherlands, Poland, Spain, Switzerland, and the United Kingdom. Asia Pacific and Japan includes incidents occurring in Australia, India, Japan, Singapore, and South Korea.

Recordable incidence rates continued to decrease gradually in 2011, with reductions in every region compared with 2010.

Leading causes of all recordable incidents (with and without lost time), 2011

Slips, trips, and falls	32%
Ergonomics—office environment	20%
Ergonomics—materials handling	16%
Struck by/against/cut by	11%
Automobile accidents	10%
Other	11%

In 2011, the leading causes of all recordable incidents remained similar to 2010, although ergonomics—materials handling and automobile accidents increased slightly (up from 12% and 7%, respectively).

Location of recordable incidents, 2011

HP sites	54%
Customer sites	25%
Business travel	14%
Telecommuting/home office	5%
Events/team building	2%

In 2011 the majority of recordable incidents were at HP sites, with 25% on customer premises. This is the first time we have reported on the location of recordable incidents.



# Employee gallery



## Tom Barrington

### 27 years of service

For Tom Barrington, working as global energy program manager in HP's Global Real Estate organization is a natural fit. He studied environmental engineering in college and has engaged in energy efficiency and sustainability efforts in every position he's held during his 27 years with HP. As a volunteer on his local public utilities commission, he also helps the community by contributing his expertise in energy and environmental utilities, such as water and waste management.

Tom, who is based in Roseville, California, United States, is responsible for driving energy efficiency and energy procurement strategies, reducing greenhouse gas (GHG) emissions, and conserving water across HP's facilities worldwide. His team helps set environmental goals for the company, and then works within Global Real Estate and other HP organizations to meet those goals. Tom's team completes dozens of projects every year, from retrofitting lighting to installing sophisticated building-control systems. These complement other major activities around the company, such as real estate consolidations, that improve HP's overall efficiency.

"HP has paid attention to energy efficiency all along, and over the last 3 or 4 years, the company has really stepped up its investments," Tom says. "We're focusing on things that deliver clear and solid returns."

Collectively, HP's actions have paid off. In 2008, HP set a goal to reduce absolute GHG emissions associated with its facilities by 20% from 2005 levels. In 2011, HP reached this goal—2 years early. But that doesn't mean Tom is satisfied. He's already working with his team and others around the company on the next goal.

Tom is particularly enthusiastic about a recent project that promises to deliver great returns. In 2011, HP implemented a software platform from Hara, a provider of energy and sustainability management software, to help HP more accurately measure and monitor energy consumption in its facilities. Because the software will integrate data from across HP's entire real estate portfolio, Tom says his team will gain insights they've never had and can better identify areas with the greatest potential for savings. "It's a major step forward in our ability to be complete and accurate in our measurements," says Tom. "We can perform a much more informative analysis than we've ever done before."

The team's work has the potential to make an even greater impact. [HP Energy and Sustainability Management \(ESM\)](#) group is also involved in this global implementation. The ESM group will apply the insights and best practices they gain to benefit other customers undertaking similar deployments.

Overall, Tom sees enormous potential to continue improving the performance of HP facilities. "I'm excited about going even deeper into our buildings to find efficiency, and looking for cost-effective ways to generate our own renewable energy," he says.



## Frances Edmonds

### 13 years of service

From her vantage point in Toronto, Canada, Frances Edmonds oversees HP Canada's partnership with World Wildlife Fund (WWF), one of her many duties as director of environmental programs for HP Canada.

It's a big task. Through a project called WWF Living Planet @ Work Championed by HP, the two organizations are helping to give small and medium businesses free tools they need to raise the visibility of sustainability issues within the workplace, pinpoint the most effective ways to shrink their environmental footprint, and engage employees to become advocates for change.

"Canada is a land of small and medium businesses. We have more than a million of them. And typically, they don't have a lot of resources or expertise in sustainability," Frances says. "Yet, together, smaller organizations can make a major contribution to the conservation of the planet's resources. They just need a helping hand to make it happen."

HP and WWF are striving to enroll 500 companies in Living Planet @ Work and raise \$1 million in charitable donations through workplace giving by 2014. The contributions will be used for WWF research and conservation projects. Companies that sign up benefit from HP expertise in responsible IT purchasing, sustainability reporting, and employee engagement. The latter, Frances says, "is a really neat way to drive sustainability into the workplace."

Frances is no stranger to employee education and engagement. In 2008, she initiated the HP Eco Advocate program, formerly known as Green Advocates. The program prepares HP employees to talk with customers and colleagues about environmental issues, such as climate change. It also trains them to speak about HP's environmental initiatives—such as the HP Planet Partners return and recycling program—and HP products that can help customers reduce their impact. This know-how has already benefited Living Planet @ Work. Two HP Eco Advocates who are enrolled in the Living Planet @ Work project recently shared their knowledge at a webcast for businesses.

Frances sees a genuine need to increase and facilitate environmental education among business leaders and employees. As a speaker at many events and educational institutions, and as a mentor to environment and business co-operative students at the University of Waterloo, educational efforts are close to her heart. "People don't always understand how to procure greener products and services or change their lifestyles," Frances says. "We have to play a role in educating as well as doing."



## David Fuqua

### 28 years of service

Data centers are notorious for their consumption of energy. David Fuqua, sustainability program lead for HP Enterprise Services' Global Data Center Operations in Plano, Texas, United States, leads a team dedicated to finding ways to conserve energy in HP's client-serving (or "trade") data centers. Their efforts often result in significant reductions of costs, energy consumption, and greenhouse gas emissions—outcomes David takes pride in.

He joined HP in 2008 after spending nearly 25 years with Electronic Data Systems (EDS), where part of his role was to measure the company's global carbon footprint. He applied the expertise he gained there to improve efficiency in HP's trade data centers.

Over the past 3 years, David and his team have worked on a variety of energy-saving projects, from an ultrasonic humidification system that reduces the energy needed to maintain data center humidity levels to containing rows of server racks to prevent hot and cool air from mixing, which saves on cooling costs.

In 2011, David's team analyzed how cool air was escaping from underneath the raised floor in several data centers. They discovered that in HP's older data centers, a significant amount of cool air was escaping through cutouts in the floor where power and network cables passed through. In nine of these data centers, they sealed the gaps and rebalanced the perforated floor tiles to better

distribute air flow. David expected the change would allow each facility to turn off 20% of its large air conditioning units on the computer room floor, but was delighted to see they were able to turn off 38%, on average.

"It was a huge success. We saved nearly 8 million kilowatt hours a year," says David. "It's really satisfying to see real savings as a result of our work."

All told, David estimates that as a result of his team's work in 2011, HP's trade data centers in North America will save about 13 million kilowatt hours (kWh) on an annual basis—equal to about 7,200 tonnes of carbon dioxide equivalent emissions. The energy saved is enough to power a 3,700-square-meter data center and office area for a year.<sup>1</sup>

Even when he's not at work, David is looking for ways to save energy. For example, he recently upgraded the air conditioning system in his home and insulated his attic. It's just one of the ways his job inspires his life. "I really enjoy my work," says David. "I have a good time in this role."

<sup>1</sup> Based on the size of HP's data center and office space in Markham, Ontario, Canada, which consumed 11.4 million kWh in 2009.



## Kathryn Hall

### 28 years of service

Kathryn Hall, HP statistician and quality systems engineer, is grateful for the wonderful math teachers who inspired her growing up. Now she's using her skills and enthusiasm to pass her passion for math on to the next generation. [Learn more about Kathryn.](#)



## Shelley Jeffcoat

### 2 years of service

As a workforce planning program manager for HP's human resources team, Shelley Jeffcoat is responsible for end-to-end management of several critical hiring initiatives.

In February 2010, when Shelley started mentoring a struggling co-worker, she realized other HP employees could benefit from the same kind of support. So she launched a peer-mentoring program designed to help employees in her department develop successful careers and discover their untapped talents. The program has grown dramatically and is now available to all employees at the HP site in Conway, Arkansas, United States. "We have a team of about 10 volunteers who work very hard to make this program possible," Shelley says.

Participants in the voluntary peer-mentoring program exchange advice, problem solve together, and help each other develop the skills they need to accomplish their goals. For example, they often use meetings to practice public speaking. As the program grows and expands, the volunteer coordinators also look for ways to add other kinds of career-development opportunities. For example, they host monthly lunch-and-learn events, facilitate a Breakfast with a Leader series, produce educational podcasts, and organize special events designed to empower employees to network and learn from HP business leaders.

Shelley estimates the program has helped more than 500 HP employees further their career-development efforts. "I'm passionate about motivating people and encouraging them to do their very best. I enjoy helping team members continue to grow at HP," Shelley says.



## Sundeep Khisty

### 17 years of service

Sundeep Khisty considers himself lucky; his job allows him to apply a personal passion. As the practice principal for [HP Carbon Emissions Management Service](#) working out of Sydney, Australia, Sundeep provides tools that help HP's enterprise customers better understand and accurately measure their companies' carbon footprints.

Sundeep's team helps companies set goals and track progress by giving them tools to manage processes in a more sustainable way and providing key performance indicators and dashboards. For example, Sundeep's team recently helped a major energy company justify the cost of various programs that had environmental benefits, such as telecommuting. Another client, a midsize Australian bank, changed its procurement policy to include more energy-efficient products after Sundeep's team demonstrated the potential savings.

"These companies have a lot of good strategies, but they don't know how to implement them. We bring them the database, methodology, and reports to start their journey," says Sundeep.

Sundeep, who regularly speaks at sustainability-focused conferences and events, is appreciative of what he calls an opportunity for personal contribution.

"Being asked to fill this position was the equivalent of my calling. It was a critical shift in my thinking—even in my belief system," he says. "The impact of climate change will not just be felt for 1 or 2 years, but for the whole century. And it's going to impact future generations."

HP Carbon Emissions Management Service is an important service in HP's ongoing efforts to help customers reduce energy consumption and address climate change. Beyond changing the way enterprises work, Sundeep and his team are also transforming how companies think about energy use.



## Eberhard Koehler

### 14 years of service

For Eberhard Koehler, business ethics involves more than simply following regulations. It means giving everyone a fair shot. Eberhard is HP's director of Worldwide Volume Operations Business Risk Management and Compliance and works in Cupertino, California, United States. He leads a team dedicated to ensuring that HP's channel partners do business with customers and other third parties without the use of corrupt practices, such as coercion or bribery. His work helps HP comply with anti-corruption and global trade laws, while encouraging true competition.

"I believe that when you go to work and do your best, your end goal should be to win the deal because you are the best person," says Eberhard. "You shouldn't miss out on an opportunity because someone else is doing something unethical."

Eberhard and his team design policies and educational programs that help HP partners understand regulations and avoid noncompliant behaviors. "We level the playing field, so that everyone has the same chance to win deals," says Eberhard.

His team brings together experts from all over the world, from Malaysia to Mexico, and everywhere in between. This cultural diversity helps his team communicate with partners on a global scale, while maintaining good working relationships.

"Talking about bribery and anti-corruption is not necessarily a nice topic," he explains. "You need to be very sensitive when addressing ethical practices. You need to establish trust with your audience, and only then will you be in a position to talk about ethics."

As HP continues to evolve its ethics and compliance programs, Eberhard is proud of the company's efforts. "There's no question at HP that this is the right thing to do. There's a high ethical standard in this company."



## Phillip Kong

### 11 years of service

As HP Enterprise Services' green practice consulting manager for Asia Pacific and Japan, Phillip Kong works with some of HP's largest customers to calculate the carbon emissions created by their IT infrastructure and then helps them identify ways to reduce those emissions.

Phillip also shares his skills and expertise with a broader group of HP employees in his role as the global lead for the [HP Sustainability Network](#). This volunteer group consists of thousands of HP employees across 36 chapters worldwide who are committed to reducing the environmental impact of HP and its employees. Phillip works to support each chapter as the members develop projects that are based on their unique concerns. He's working to improve the way chapters report on their initiatives, giving them a deeper understanding of their impact. This strategy helps create stronger engagement, and better results. "We allow each chapter the individuality and autonomy they need to address the issues they are passionate about," says Phillip.

Phillip understands firsthand the hard work volunteers put into their projects. He established the Melbourne chapter in 2009, the first in Australia, and has helped make it one of the fastest-growing and most active employee groups at HP, with more than 300 members. "We have a fantastic group of committed people who work really hard to make the network a success," he says.

Although Phillip is well known inside HP for his work, he's also gaining recognition outside of the company for his efforts. Phillip was recently 1 of 10 individuals to be selected for a sustainability leadership development program sponsored by the [Corporate Eco Forum](#) that will take him to the Amazon Rainforest in July 2012. "Sleeping in hammocks with no electricity for 3 days—that's pretty immersive," says Phillip. "We will be literally in the middle of nowhere, the nowhere being one of the most diverse ecosystems in the world."

The experience will help fuel Phillip's understanding of the environment, while also informing his work within HP. Phillip says he is driven by his core belief of the power of the individual. "In the end, the only way to effect change is through the individual. Good policy is great, but a great attitude is unbeatable."



## Chantal Martineau-Kirse

### 32 years of service

Chantal Martineau-Kirse is a project manager for HP Enterprise Services. She was one of the founding team members of the HP Women's Network in Munich (one of four in Germany) in 2007, and currently serves as the coordinator. The network promotes the professional development, visibility, and retention of women at HP.

Through the network, Chantal encourages women to take control of their careers and to support each other, and she assists them in numerous ways. She ensures that the network's members are aware of the many resources available to them through [HP's professional development](#) programs. Chantal promotes networking opportunities, such as [HP's Employee Resource Groups \(ERGs\)](#), diversity conferences, and events like the HP German Women's Summit. She also facilitates career development events including speakers, lunch-and-learns, and workshops, in addition to mentoring new hires and students. And she supports HP women as they strive to achieve work-life balance, by organizing events, such as yoga classes.

"I have a very positive outlook on life, and I'm good at bringing people together to collaborate. Even though the work I do is not a part of my daily job, I love it," says Chantal.

Over the years, the HP Women's Network in Munich has grown to more than 260 members. The success of the group in part reflects Chantal's dedication to creating a work environment where women are heard, feel supported, and can thrive.





## Paul Mazurkiewicz

### 14 years of service

Dr. Paul Mazurkiewicz is a senior scientist at HP's laboratory in Fort Collins, Colorado, United States. He helps HP comply with environmental laws worldwide and alter product materials and related policies that reduce the risk of health and environmental impacts.

He's a member of the GreenScreen team—the HP group charged with categorizing certain materials used in HP products and identifying more responsible substances to be used as alternatives. The team uses a materials screening process based on the GreenScreen for Safer Chemicals framework developed by the nongovernmental organization, Clean Production Action.

The HP GreenScreen team examines materials based on toxicity, the amount of energy it takes to create the material, and how easy the material is to recycle. They then create white lists of preferable substances that can be used to replace the old materials. For instance, as HP reduces the use of polyvinyl chlorides (PVCs) and brominated flame retardants (BFRs) in its products, the HP GreenScreen team balances the sustainability of the replacement materials with other key performance attributes. "It's not good enough to take something out; you have to know what you're putting in and make an informed decision," Paul says.

In addition to helping HP find better materials to use, Paul is the primary technical author of the HP Active Verification Material Testing Specification, a companywide standard for materials testing frequencies and methodologies referenced by HP suppliers worldwide. By providing HP suppliers with methods to accurately test for restricted materials—such as PVCs and BFRs—HP can be confident that its products comply with company requirements and government regulations.

Paul is currently using his testing expertise to create a faster and more cost-effective way to check for the presence of phthalate plasticizers. HP recently restricted the use of certain phthalates in HP products and is considering additional limitations. Paul's new testing method is more efficient than current methods, enabling HP and suppliers to more easily and frequently test products and materials. This will keep customer costs down while upholding HP and other environmental standards. Paul relishes quandaries that allow him to use scientific tools to help HP reduce the impact its products have on the world. "Environmental sustainability is an opportunity for innovation. It's a challenge to meet," he says.



## Zoe McMahon

### 14 years of service

Zoe McMahon, director of HP's Social and Environmental Sustainability and Compliance program, leads the HP team focused on product and supply chain social and environmental responsibility. From her office in Palo Alto, California, United States, she focuses on a wide range of issues including ethical sourcing, responsible manufacturing, workers' rights, product environmental compliance, and HP's product reuse and recycling programs.

It's a big job, and it requires Zoe to consider ways that HP can make a positive impact on a global scale. So when she was invited in 2010 to join the executive board of the Global Social Compliance Program (GSCP), a multi-sector, multi-industry initiative aimed at improving working conditions in supply chains around the world, she welcomed the opportunity. As a passionate advocate of human rights, Zoe is eager to apply the lessons she's learned at HP to her work on the executive board. The board is tasked with creating and promoting a standard for supply chains across multiple industries, and developing principles to ensure that the human rights of workers are respected.

Zoe says it's important that HP participates in organizations like the GSCP. "To really have an impact, we need to ensure that brands and retailers alike avoid duplicating efforts or confusing suppliers with multiple requirements," Zoe explains. "Only then can they focus on the real goal of improving their suppliers' performance."

The GSCP's work is ambitious. The board is currently focused on promoting the equivalence process, which allows companies from different sectors to accurately compare their social and environmental compliance systems, tools, and processes against an agreed-upon best practices standard. The GSCP is also working to establish regional networks of experts in manufacturing centers, so that suppliers who aren't complying with human rights standards get the support they need to improve their performance. "We want to empower factories to improve their conditions against the standards we developed," Zoe explains.

While the GSCP undoubtedly benefits from HP's expertise, HP benefits as well. For example, through dialogue with GSCP's stakeholder advisory board, which includes many of the world's most respected experts on supply chain and human rights issues, HP stays on the leading edge of human rights thinking. Zoe says the work is also rewarding from a personal perspective. "I'm proud to be a part of the GSCP," Zoe says. "The mission is a big one, and whenever you can contribute to a mission that big, it's empowering."



## Cécile Mesmain

### 11 years of service

Cécile Mesmain, program manager of HP's take-back programs for the Europe, Middle East, and Africa (EMEA) region, is committed to making it easy for customers to return hardware and used HP large-format supplies and media for recycling and recovery.

Her behind-the-scenes legwork is crucial, as each country in the EMEA region has its own regulations regarding waste collection, handling, treatment, recovery, and recycling. Currently based in Barcelona, Spain, Cécile is an expert at researching and interpreting the complex web of regulations, and finding responsible vendors who are able to meet them.

Cécile's efforts make the management of used supplies—a potentially challenging issue for customers—into a simple and intuitive process. “Many customers don't know a lot about the regulations regarding waste, and have no idea which companies to use,” Cécile explains. “Our customers are reassured to know that if they give their supplies back to HP, we'll make sure they're managed in a compliant and environmentally responsible way.”

The programs' growing participation rates are an indication that customers are pleased with HP's efforts. “We receive a lot of requests for new or expanded take-back programs,” she says. “Our programs have really grown in the past 5 years, and it's exciting to know we're meeting our customers' needs.”

Although Cécile is proud of all of HP's take-back programs, she's most enthusiastic about those created for HP Indigo supplies. The HP Indigo take-back program has been extremely successful, with approximately 80% of HP's customers in the United Kingdom and France registering for the program—the highest participation rate among all of HP's EMEA take-back initiatives. For Cécile, the positive response is gratifying. “By responsibly managing the waste, we're able to make a difference for HP and our customers, and make a positive contribution to society in general.”



## Aziz Mohamed

### 10 years of service

Aziz Mohamed is the health initiatives manager for the Office of Corporate Strategy and Technology. He is responsible for coordinating [HP's partnerships](#) with organizations, such as the Clinton Health Access Initiative and Partners HealthCare, and helping HP deliver innovative health programs to underserved people and communities.

Despite his work in the area of global health, Aziz had never volunteered before he took a life-changing trip to Kenya.

Aziz and 20 HP colleagues traveled to an orphanage for children abandoned by their families due to disease or illness. The majority of the 200 children, ages 2 through 18, had been diagnosed with HIV. The team brought food and essential supplies, but one of their most important contributions was time. The volunteers spent hours playing games, singing, dancing, and talking with the kids.

After half a day being surrounded by such courageous but sick boys and girls, Aziz came home a different person. “I was personally touched and affected,” he says. “I saw tears in the eyes of my HP colleagues and friends, but I also saw determination and the will to make the world a better place.”

Aziz was so moved by his experiences that when he returned home to his wife and three children he announced that he was going back—and taking his family with him. “I will spend my time, and my family's time, to do whatever it takes to make a positive change,” he explains.

[Hear more about Aziz's time as a volunteer in Kenya](#), in his own words.



## Christophe Mosby

### 2 years of service

HP attorney Christophe Mosby volunteers his time to help get minority high school students excited about pursuing a legal career.

[Learn more about Christophe.](#)



## Chandrakant Patel

### 25 years of service

Chandrakant Patel, HP senior fellow and interim director of HP Labs, brings tremendous enthusiasm to his profession. He often says, “I am as excited Friday night as I am on Monday morning.” For more than 20 years, Chandrakant has played a central role in making HP a leader in energy-efficient computing. His research with HP Labs in the early 1990s led to the next generation of microprocessors and data centers. Later that decade, Chandrakant began investigating the concept of “smart data centers” that dynamically provision computing, power, and cooling for optimum efficiency.

More recently, he has extended his research beyond data centers to cities in what he refers to as “City 2.0.” His vision is to create more sustainable urban infrastructures by embedding IT to monitor and manage resources, such as water, power, and waste. “It’s not just about making a better handheld device or a better desktop computer. It’s about using those devices to make a better future,” he says.

Experience has taught Chandrakant that building a more sustainable world requires a diversity of expertise. He assembled and leads a multidisciplinary team of mechanical engineers, computer scientists, and even an economist—all collaborating to build solutions that are holistic and comprehensive. “I have built a very dedicated and passionate team. They are all here because they want to address society’s needs.”

Chandrakant’s passion for a more sustainable future doesn’t begin or end at the lab. As he has done for more than 20 years, he starts and ends his days by taking San Francisco Bay Area public transportation to and from work, often engaged in animated conversations with colleagues, and he carries a sketchbook to capture ideas whenever they come to him. He’s also a prolific writer—having published numerous articles and more than 150 papers, many on the importance of implementing [sustainable IT](#).

Chandrakant sees boundless potential to create business and social value through sustainability. “I wish I were 20 years younger, because there are so many advancements that lie ahead,” he says. “We are not limited by technology. The challenges—and the opportunities—are in how we apply IT for sustainability.”



## Scott Taylor

### 25 years of service

As HP's chief privacy officer, Scott Taylor and his team work with our business groups, regions, and corporate functions to integrate privacy and data protection into our processes, products, and services.

Scott has been with HP for 25 years, gaining experience with the company while still in college and joining full time after graduation. Having majored in biochemistry and public relations, he forged an early career as a marketer who could speak the language of science. After establishing HP's first direct marketing efforts, from 1994 to 2006, he led the team that launched our Internet presence.

This role made Scott acutely aware of how much personal data was collected online, so his transition to chief privacy officer in 2006 felt natural. He's continually motivated by the potential his work has to make a difference for the typical person. "It's great to lead a program that impacts people's lives every day," says Scott. "One of our industry's greatest challenges is to ensure personal data remains secure while providing more and better services. This requires putting privacy and data protection at the heart of all we do, so customers understand and have real choices about how their data is used."

To accomplish this, Scott and his team have created a holistic privacy accountability model that ensures the people handling data are accountable and their practices transparent. One tangible example is the deployment of HP's Privacy Advisor tool, which employees use daily to put the company's privacy policies into practice.

This approach is influencing regulatory models around the world, and Scott believes other companies should develop similar mechanisms for privacy protection, working closely with nongovernmental partners and regulators. He's optimistic that this will happen, as consumers demand higher standards and some companies' high-profile missteps focus media attention on privacy. Importantly, Scott sees that leadership in this area provides competitive advantage: "Customers increasingly care about what happens to their data, and seek companies they can trust to protect them from financial and personal harm."



## Barath Venkatesh

### 4 years of service

Barath Venkatesh is based in Chennai, India, and leads a campaign analytics team within HP's Global Analytics division. Shortly after starting at HP in 2007, he took a year away to work as an education fellow for a social enterprise that expands access to financial services for educators. When he returned to HP, Barath knew the skills he garnered and contacts he made could be valuable to the newly formed [HP Catalyst Initiative](#), a program aimed at helping young individuals develop skills in science, technology, engineering, and math (STEM). So he reached out to HP's Sustainability and Social Innovation (SSI) team and offered his help.

The SSI team was looking for partners for the Catalyst Initiative in India, and Barath used his experience to help them identify several organizations, including the [Agastya International Foundation](#). Agastya is a hands-on science education program focused on bringing mobile labs to poor, rural parts of India—helping children learn about science by experiencing it firsthand.

Agastya applied to become a leader for the HP Catalyst Initiative's New Learner consortium. Together with researchers and experts from six other leading educational institutions around the world, Agastya is exploring how to create new, engaging models of student-driven STEM learning that lead to higher school completion rates and promote "learning how to learn."

Barath continues to look for places within HP to use his skills and knowledge to improve education. He supports HP's SSI team on special projects, particularly those that impact India. In 2011, Barath served on the advisory panel for the HP Catalyst Summit, held in India. The event brought members of the HP Catalyst Initiative face to face to discuss global issues and identify new opportunities in STEM education. He pursues other opportunities that combine his passion for education and social enterprise as well. For example, he was chosen as a fellow at the 2011 Global Economic Symposium in Kiel, Germany, where he was invited to discuss financing for rural private schools in India.

Barath is excited about how HP can contribute to education, as well as his opportunity to be a part of making progress. "I think technology has a huge role to play in education, and that's where HP can step in," says Barath. "Given the limited resources and challenge of scale in developing countries, social investments—when directed carefully—have the potential to impact more people than traditional philanthropy."



## Ernest Wong

### 3 years of service

Ernest Wong, a Hong Kong-based program manager for the HP Supply Chain Social and Environmental Responsibility (SER) program in the Asia Pacific and Japan region, is instrumental in ensuring that HP's suppliers respect the rights of workers, provide safe working environments, and improve their everyday social and environmental practices.

As part of his work, Ernest coordinates with nongovernmental organizations (NGOs) to help train suppliers and create strong internal processes that lead to substantial and lasting improvements in SER performance. Ernest says this capability building can take many forms, including increasing suppliers' awareness of [HP's Electronic Industry Code of Conduct](#), holding trainings on antidis-crimination and labor rights, and creating more holistic management systems to help suppliers better meet their SER responsibilities.

Ernest says that good communication is the key to capability building. All parties—including NGOs, supplier managers, and workers or worker representatives—need to have confidence in the program to make it productive. "We have to determine everyone's common interests and learn how to trust one another," he explains.

Ernest says the work is always rewarding, but is especially gratifying when positive feedback comes from the suppliers themselves. "A factory manager told us the training helped clear up some misunderstandings between workers and management, so that workers had a much better understanding of their rights and obligations," he says. "A very credible NGO did the training, and it helped build trust within the factory."

The programs also demonstrate that a little bit of goodwill can go a long way. "Not only are we expanding many of the programs, but our key suppliers are beginning to share their best practices with their peers in areas like labor relations and energy savings," he says. "It's a very positive development when our programs grow without our help."



# Social innovation



“We believe that when companies use their core strengths as well as the skills and passions of their employees to address pressing social and environmental challenges, they can make a profound, positive impact on the world.”

—Gabi Zedlmayer, Vice President, Sustainability and Social Innovation, HP

At HP, our approach to social innovation is based on the concept of creating shared value. This approach uses guiding principles and practices that deliver an economic benefit for companies, while simultaneously improving social and environmental conditions.

We strive to use the same passion, energy, and culture of innovation that make HP commercially successful to make a profound and positive impact in the world. Our commitment to social innovation is integrated into our overall business strategy, helping us to create long-term value that benefits customers, shareholders, and employees.

We help address critical social needs through a powerful union of innovation and collaboration. Our strategy involves treating our social innovation projects like business engagements. We work with our partners to understand a targeted need, and identify the capabilities and expertise we have to offer, harnessing all of HP’s assets—human, technological, intellectual, and financial—to develop a sustainable solution.<sup>1</sup>

We apply our knowledge and expertise to help tackle challenges in [education](#), [entrepreneurship](#), and [health](#), and to support [community engagement and employee giving](#). In 2012, we are integrating social innovation and environmental sustainability, focusing our combined efforts to make a positive impact in the world.

Learn more about the creating [shared value](#) approach to social innovation.

## Highlights in 2011

**1.2 million**

Approximate number of people HP Learning Initiative for Entrepreneurs (HP LIFE) provided training and technology to since 2007

**more than  
744,000**

Number of hours HP employees and retirees volunteered in communities worldwide, valued at nearly \$26 million USD\*

**65,000**

Approximate number of infants tested for HIV through HP’s Early Infant Diagnosis program

**\$10 million USD**

Amount HP has invested in the HP Catalyst Initiative since 2010

<sup>1</sup> Some of the data reported on social innovation programs in 2011 is based on information provided to HP from partner organizations.

\* Value based on type of volunteering: \$150 USD per hour for board, service corp, pro bono, and skill-based; \$20 USD per hour for hands-on. Uncategorized hours are not reflected in this total.



## Collaborations and partnerships

Taking a holistic approach is essential to delivering successful, scalable solutions that benefit communities over the long term. To address complex, multifaceted social challenges, we collaborate with a range of organizations including leading businesses, governments, nongovernmental organizations (NGOs), thought leaders, social entrepreneurs, and academics.

The following are a few examples of collaborations from 2011:

- **Partnering with customers** The United Nations is a long-term customer of HP and together we partnered to support the UN Refugee Agency [UNHCR](#) in its efforts to help [Kakuma refugees](#) gain greater access to education and improve their livelihoods through technology.
- **Partnering with government agencies** HP and the U.S. Agency for International Development (USAID) are committed to exploring collaboration as a way to promote education, global health, and responsible mineral trading systems, and to supporting economic opportunity through entrepreneurship.
- **Partnering with NGOs** HP is working with NGO [mothers2mothers](#) to transform the organization's information technology infrastructure and develop new, more efficient processes for information access and management.

[View a map](#) that summarizes the geographical reach of our activities.

## Tackling social challenges in collaboration with HP Labs

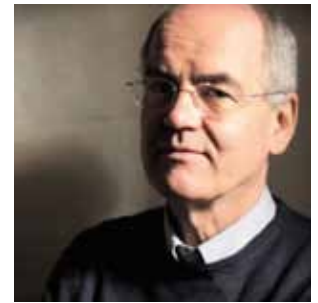
From information analytics and cloud security to [environmental sustainability](#), [HP Labs](#) works on the cutting edge of innovation. Recent work from HP Labs helped meet critical social needs as well.

- HP Labs and Lucile Packard Children's Hospital at Stanford developed a [Patient-Centered Dashboard](#) that can help prevent human error in medical settings. [Watch a video](#) for more information about this lifesaving innovation.
- The HP Software division's Professional Services group and the Social Innovation team collaborated with HP Labs to create a cloud-based, [global authentication service](#) to fight the problem of counterfeit drugs in developing countries.

### John Elkington

Executive Chairman, Volans

John sees HP drawing on its rich history, values, skills, and technologies to create new business models that help address global challenges. [Visit our online gallery](#) of external stakeholder perspectives to see John's video.



# Education

Education drives personal achievement, seeds groundbreaking ideas, and fuels economic prosperity for individuals, communities, and entire countries. HP focuses on strengthening science, technology, engineering, and mathematics (STEM) education because we recognize how paramount it is to helping solve some of the world's most critical challenges. By applying technology in creative ways to extend and enrich teaching and learning, we are helping the next generation of leaders, innovators, and workers develop the knowledge and skills they need to succeed in the global economy.

## HP Catalyst Initiative

In 2010, HP launched the Catalyst Initiative to build a global network of educators who explore new approaches to STEM education. The network uses an interdisciplinary approach and emphasizes creativity, collaboration, and cross-cultural expertise. Our goal is to transform STEM teaching and learning—from secondary education through the university level—and inspire

### HP Catalyst Education Initiative highlights

6

Number of consortia in the Catalyst network

15

Number of countries the network reaches

\$10 million USD

Amount HP invested in the Catalyst network since 2010

56

Number of organizations receiving funding from the HP Catalyst Initiative

students to use their technical ingenuity and creativity to address urgent social challenges. By the end of 2012, member organizations estimate that more than 250,000 students around the world will benefit from the Catalyst Initiative by experiencing innovative ways of learning and teaching.

The HP Catalyst Initiative selects network members through a competitive call for proposals open to educational institutions, including schools, universities, and nonprofit and nongovernmental organizations. Network members explore new ways to transform STEM education and are placed into six consortia based on their areas of research.

In 2011, HP added 21 new organizations to the Catalyst network, for a total of 56 organizations in 15 countries.<sup>1</sup> HP also funded 20 new projects and established a new consortium. The new consortium, STEM-preneur, led by the Tsinghua University School of Economics and Management in China, looks for ways to combine STEM education with the skills and passion of entrepreneurship. Each consortium receives HP technology, cash, and professional support. In 2011, HP contributed \$4 million USD to the network, bringing the total amount invested by HP to \$10 million USD since 2010.

[Watch a video](#) to learn more about the HP Catalyst Initiative. You can also find more information on our [website](#), including a complete list of the network members.

**“The Catalyst Initiative is one of the most important, collaborative, technologically savvy, and innovative approaches to enhancing STEM education that is in operation today.”**

—John Bourne, Executive Director, Emeritus, of the Sloan Consortium  
(Leader of the HP Catalyst Initiative Multi-Versity Consortium)

### Accomplishments in 2011

HP provides financial support and technology to HP-Catalyst consortia. The following are a few examples of what Catalyst members accomplished in 2011 with HP’s help (name of consortium is in bold).

- **Multi-Versity** To increase student engagement, the engineering faculty at National University (San Diego, California, United States) replaced traditional lectures with projects requiring students to

create challenging, interactive games that demonstrate engineering and physics principles. Another project from this consortium comes from Northwestern University (Evanston, Illinois, United States). The school is expanding a network of online laboratories that provides students in rural and urban high schools with access to science equipment, hundreds or even thousands of miles away. So far, participating schools have reported a 15% overall increase between pre- and post-program science test scores among schools using the online labs. The pilot program includes nine schools, reaching students in a wide variety of low-income, urban, and rural school districts. [Learn more.](#)

- **Global Collaboratory** The Masinde Muliro University in Kenya is improving chemistry education by delivering mobile technology to rural areas within the country. Chemistry simulations are loaded onto mobile workstations and brought to schools that have infrequent electricity and no access to the Internet. [Watch a video](#) to learn more.
- **Pedagogy 3.0** Kingston Primary School in Western Australia is supporting teachers in remote schools by promoting collaborative models that use technology to connect teachers. This helps provide science teachers the support they need to be successful.
- **STEM-preneur** The Learning Links Foundation empowers youths in India to identify local developmental issues and form a scientific and innovative approach to address local problems. The goal of this initiative is to enhance living conditions and improve businesses and trade in rural India.

## Education in India

In 2011, more than 100 educational leaders from 15 countries participated in the first HP Catalyst Summit in New Delhi, India. The event, sponsored by HP and organized by the International Society for Technology in Education, addressed global challenges related to STEM education. During the summit, HP committed to investing \$1 million USD to the [Education Innovation Fund for India](#) (EIFI), which provides grants to individuals or organizations with scalable projects capable of significantly changing the way education is approached in India.

### HP employees making an impact: Barath Venkatesh

Barath Venkatesh uses his experience to help HP make lasting improvements in education—especially in his home country of India. [Learn more about Barath Venkatesh on page 146.](#)

<sup>1</sup> There are 56 organizations receiving funding from the HP Catalyst Initiative. Many more organizations participate in the effort without receiving funding.

# Entrepreneurship

All over the world, entrepreneurs drive innovation, create jobs, and fuel economic opportunity. HP works with organizations to help recent graduates, young people, and aspiring and established entrepreneurs acquire the information technology (IT) skills and knowledge they need to launch successful businesses and help their local communities prosper.

## HP LIFE

[HP Learning Initiative for Entrepreneurs \(HP LIFE\)](#) is a global training program that helps students, aspiring and established entrepreneurs, and small business owners develop the IT and business skills necessary to build successful companies and create jobs. Since 2007, HP LIFE programs have reached approximately 1.2 million people with training, access to technology, and online activities. In 2011, HP added 40 new training centers to the program, increasing the total number of training centers HP works with to nearly 340 across 49 countries. In some cases, trainees have started their own businesses, often creating jobs for others in the process. In other situations, the program has helped trainees gain the necessary skills to find employment. Overall, HP LIFE has helped to establish and expand more than 19,700 businesses since 2007, and helped approximately 42,900 people find work.

The following are a few examples of people who succeeded with help from HP LIFE in 2011:

- Washington Mvelase, a young entrepreneur and Internet café owner in South Africa, struggled to manage his new business. After taking training classes with HP LIFE, he developed the professional skills necessary to expand his business and manage his finances more efficiently. [Watch a video](#) to learn more.
- Neha Gupta took classes with HP LIFE to help her develop the business and IT skills she needed to start a jewelry business in India. [Watch a video](#) to learn more.
- Bano Fatima's organization provides a small community of weavers in India with the tools they need to sell their products. Her two biggest challenges in starting her small enterprise were IT and communication skills. HP LIFE taught her how to manage her expenses and give presentations that are more engaging. [Watch a video](#) to learn more.

[Learn more](#) about other success stories from HP LIFE.

**“Our partnership with HP allows us to provide students around the world with what may be their first experience with social innovation principles. Our program shows tomorrow’s entrepreneurs the importance of integrating social innovation values into the businesses that they will lead one day.”**

—Caroline Jenner, Chief Executive Officer, Junior Achievement Young Enterprise (JA-YE) Europe

## Social Innovation Relay

Getting young people excited about entrepreneurship is an investment in future job creation. That is why HP, in partnership with Junior Achievement (JA), created the [Social Innovation Relay](#). This worldwide, interactive, Web-based competition allows young students, ages 15 through 18, the opportunity to think like social innovators and develop ideas to help solve some of the world's most pressing challenges. Groups of students from 11 participating countries work with HP employees as mentors through a global, online system.

In 2011, nearly 10,000 students and 185 HP volunteers participated in the learning program. The winning team, Fortuna, from Nizhnekamsk, Russia, developed an innovative approach to waste management. Their idea to transform items that had been thrown away into new products of practical and aesthetic value has taken off. They now have a marketing strategy that has helped drive demand for their goods in a niche market. [Watch a video](#) about the winning idea.

## Junior Achievement (JA)

HP has worked with [JA](#) since 1996 to develop new ways of building entrepreneurship and business skills among young people. Many HP employees volunteer in JA tutorial and training programs.

# Health

Good health is fundamental to a good quality of life. But today, access to even basic health services is beyond the reach of billions of people. Public and private health systems are struggling to deliver effective care in developed as well as in emerging markets.

HP believes technology can transform global health and help increase access to affordable, quality healthcare worldwide. We apply our broad portfolio of products and solutions, our technical and business expertise, our partnerships, and the time and experience of our employees to tackle pressing health needs and drive structural, systemic improvements throughout health systems globally. The UN Millennium Development Goals (MDGs) help us prioritize our efforts to focus on some of the greatest health challenges facing the world today, including [reducing child mortality](#), [improving maternal health](#), and [combating HIV/AIDS, malaria, and other diseases](#).

A collaborative approach to problem solving and a diverse set of skills and experience help drive innovations in health. HP works with nongovernmental organizations (NGOs), governments, and health organizations to help deliver lifesaving solutions. We focus on two primary areas: strengthening health systems and accelerating electronic and mobile health solutions.

## Strengthening health systems

We work closely with governments and strategic partners to structurally improve health systems around the world. [Learn more](#).

### Accelerating early infant diagnosis of HIV

HP and the [Clinton Health Access Initiative](#) (CHAI) are working with the Kenyan government to reduce the amount of time it takes to diagnose an HIV-positive infant. The Early Infant Diagnosis (EID) project automates the HIV testing process, significantly speeding up the reporting of test results and helping to save lives.

As of 2011, five state-of-the-art HP data centers connect with four existing laboratories, providing a platform to speed the transmission of data. Samples are now assigned a barcode, tested, and then recorded in a database. Instead of postal mail, results are sent by text message to SMS-enabled HP printers in rural clinics. If clinics have Internet access, they can also receive the results by email or access the data online. A process that used to take several months now reliably takes less than 30 days, allowing HIV-positive patients to receive antiretroviral treatment early. Commencing treatment at an early stage is critical in controlling the virus and is directly related to survival rates.

The technology infrastructure supporting this program is rolling out in Uganda and is expected to transform and improve other health programs as well. In 2011, approximately 65,000 infants were tested in Kenya through EID, and HP expects that more than 70,000 tests will be completed in 2012. [Read more](#) or [watch a video](#) about EID.

## Working to prevent errors in medical settings

HP and Lucile Packard Children's Hospital (LPCH) in Palo Alto, California, United States, have been collaborating on patient safety research for more than 2 years. In 2011, HP and LPCH released an electronic Patient-Centered Dashboard that helps prevent human error in medical settings. During the evaluation phase, the dashboard alerted staff with recommended changes in care for one out of three young patients. The reminders range from replacing or removing equipment that might otherwise cause infection to altering the type or quantity of medication, or adjusting beds to prevent children on ventilators from developing pneumonia. [Read more](#) or [watch a video](#) about the Patient-Centered Dashboard.

## Reaching remote areas

The [Lake Tanganyika Floating Health Clinic](#) (LTFHC) is an international nongovernmental organization that offers medical care to hundreds of thousands of people living in the isolated Lake Tanganyika Basin/Great Lakes region of Central Africa. As LTFHC moves toward its ultimate goal of operating a ship-based regional hospital on the lake, HP is providing funding and in-kind donations to support the organization's outreach programs to local communities. We're also collaborating with LTFHC and others to help develop infrastructure that is expected to improve access to quality healthcare.

In 2011, HP's support helped LTFHC conduct a women's reproductive health outreach effort to provide fistula patients with surgery, counseling, and education. This outreach is believed to be the first of its kind in the Lake Tanganyika basin. The funding we provided in 2011 continued to help LTFHC in early 2012 as it upgraded the Moba Territory Ministry of Health communications network, giving remote health clinics the ability to communicate with each other and the Moba Regional Hospital. [Learn more](#).

## Accelerating electronic and mobile health solutions

We apply our expertise in mobile and cloud-based solutions to help improve and transform the way healthcare is accessed and delivered. [Learn more](#).

### Helping prevent the transmission of HIV

South Africa-based NGO [mothers2mothers](#) (m2m) provides counseling and educational services to new mothers and HIV-positive pregnant women—helping to prevent the spread of HIV to the next generation. Since its founding in 2001, m2m has counseled more than 1 million women in seven countries across sub-Saharan Africa.

HP is working with m2m to transform its information technology (IT) infrastructure and develop new, more efficient processes for information access and management across its nearly 600 sites. In 2011, HP helped m2m update its record-keeping system from paper to digital. [Read more](#) or [watch a video](#) about m2m.

## Fighting counterfeit drugs

An estimated 700,000 people, or more, die every year from counterfeit drugs.<sup>1</sup> HP is collaborating with governments, pharmaceutical companies, telecommunications companies, and leading NGOs and social entrepreneurs to combat this problem. The Global Authentication Service allows consumers to use a code printed on their medication package to easily check the authenticity of their medications via mobile phone. Within seconds, they receive a reply letting them know whether the medication is authentic. The service started in Ghana and Nigeria in 2010, and launched in India in 2011. HP expects this service will roll out to at least three more countries in 2012. [Learn more](#).

## Reducing the spread of malaria

HP, CHAI, and Positive Innovation for the Next Generation, an NGO based in Botswana, developed an application and service available via mobile phone that gives Health Ministry officials in Botswana the vital information they need to help track, respond to, and prevent malaria epidemics. The mobile solution, which also launched in Kenya, speeds up the flow of information, enabling faster, more effective decisions during outbreaks. HP plans to help roll out this system in multiple countries in 2012 for use in monitoring other deadly diseases. [Learn more](#).

### Jackson Hungu

CHAI Deputy Country Director, Kenya

Jackson describes HP's approach to social innovation as a breath of fresh air, thanks to the company's technology and its people. [Visit our online gallery of external stakeholder perspectives to see Jackson's video.](#)



# Employee volunteerism and giving

At HP, we value supporting the communities in which we live and work. Thousands of HP employees around the world volunteered their time or donated money to support local communities and assist in disaster relief efforts during 2011. The following numbers reflect those employees who reported their volunteer efforts to HP or donated money through HP company channels.

- HP employees and retirees donated more than 744,000 hours to volunteer projects. That time spent giving back to communities is valued at nearly \$26 million USD.<sup>2</sup>
- HP employees donated \$5.6 million USD to nongovernmental organizations (NGOs), schools, and disaster relief efforts.<sup>3</sup>

## Employee volunteering

HP encourages employees and retirees to apply their abilities and expertise to volunteer efforts. We support their efforts to volunteer during both company and personal time. With manager approval, every HP employee can use 4 hours of company time per month to volunteer.

<sup>1</sup> "Keeping It Real: Protecting the world's poor from fake drugs," International Policy Network, May 2009. (Approximately 700,000 deaths from malaria and tuberculosis alone are attributable to fake drugs.)

<sup>2</sup> Value based on type of volunteering: \$150 USD per hour for board, service corp, pro bono, and skill-based; \$20 USD per hour for hands-on. Uncategorized hours are not reflected in this total.

<sup>3</sup> Value based on fiscal year donations made to NGOs and schools, and calendar year donations made to disaster relief efforts.



## Pro bono work

We are committed to strengthening the nonprofit sector by contributing time, as well as professional expertise (pro bono work). Below are snapshots of some of the pro bono projects our employees are doing all over the world in the areas of marketing, information technology, legal, finance, human resources, and engineering.

- **HP legal** Members of HP's legal team in Germany visit schools to teach students how to protect themselves online. They share their expertise on issues such as illegal downloads, copyright infringement, fraud, privacy, freedom of speech, and cyberbullying. Since the program launched in 2010, HP attorneys and other legal staff have led more than 40 training sessions and reached more than 300 students in grades 5 through 12.
- **HP human resources** HP human resources departments provide job-skills training in several locations around the world. During 2011, HP volunteers discussed resumé writing, interview skills, and career paths with participants in Canada, Mexico, Singapore, the United Kingdom, and the United States.

## Random Hacks of Kindness

Random Hacks of Kindness (RHoK) is an online community of programmers who create apps, platforms, interfaces, and systems that have a positive social impact. They give their apps away to people or organizations facing social or environmental challenges.

In 2011, HP became an RHoK global partner. Together we hosted several hackathon events in more than 30 cities worldwide to create apps that help address a variety of social needs. Examples (still in the development stage) include:

- An app that helps people with autism learn to cope with various challenges, including safety measures, expressing feelings, managing time, and bullying. [Watch a video](#) for more information.
- An app that provides people in the United States with the nearest location of farmers' markets accepting Supplemental Nutrition Assistance Program benefits (formerly known as the food stamp program).
- The Helping Hands app connects organizations that have excess amounts of food, such as restaurants and hotels, with NGOs that provide food to those in need.

[Learn more](#) about the work HP employees are doing with RHoK.

## Helping refugees

HP partnered with its long-term customer, the United Nations, to support the UN Refugee Agency (UNHCR) in its efforts to help refugee camps around the world, particularly the Kakuma refugees in Kenya. For the last 15 years, Kakuma refugees, displaced due to drought and conflict, have lived with limited access to water, near-impossible farming conditions, and a lack of transportation. During 2011, HP employees volunteered to help identify potential employment and entrepreneurship opportunities for refugees. We also provided technology to help increase access to educational materials and training opportunities in more than 30 UNHCR camps, giving refugees many of the skills needed to create a better future.

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## HP employees making an impact: Kathryn Hall

Kathryn Hall, HP statistician and quality systems engineer, is grateful for the wonderful math teachers who inspired her growing up. Now she's using her skills and enthusiasm to pass her passion for math on to the next generation. [Learn more about Kathryn Hall on page 139.](#)

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## HP employees making an impact: Christophe Mosby

HP attorney Christophe Mosby volunteers his time to help get minority high school students excited about pursuing a legal career. [Learn more about Christophe Mosby on page 144.](#)

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## HP employees making an impact: Aziz Mohamed

Aziz Mohamed traveled to Kenya and visited an orphanage. The children there had been abandoned by their families due to disease or illness, and the majority of them are HIV positive. The experience inspired Aziz to return and do whatever it takes to make a positive change. [Learn more about Aziz Mohamed on page 143.](#)

## Partnering with customers

More than 100 [HP and UPS](#) employees volunteered together to clean, paint, and landscape schools in California and Georgia, United States.

[HP and Clorox](#) volunteers also teamed up to clean and install new, donated HP IT equipment at the East Oakland Youth Development Center (Oakland, California, United States), helping the center continue its 33-year tradition of providing education, physical development, computer literacy, and more to at-risk children.

## Employee giving

The Hewlett-Packard Company Foundation provides employees in the United States with one-to-one cash matching for gifts to qualified nonprofit organizations, at up to \$1,000 USD per employee, per fiscal year. In 2011, HP employees in the United States donated cash totaling approximately \$3.8 million USD, matched by \$3.1 million USD from the Hewlett-Packard Company Foundation.<sup>1</sup> Since 2007, HP and employees have donated \$30 million USD through the program. In addition, U.S. employees can donate HP technology to qualified charitable organizations or schools. Employees contribute 25% of the product list price, up to \$5,000 USD, and HP contributes the remaining amount. In 2011, HP and its employees in the United States donated products worth approximately \$5 million USD. Since 2007, HP and employees have donated products valued at approximately \$30 million USD.



## Disaster relief

In 2011, HP employees, HP, and the Hewlett-Packard Company Foundation donated money, equipment, and expertise in response to natural disasters, including the earthquake and subsequent [tsunami in Japan](#).

At right are the approximate values of cash and product contributions from HP employees, HP, and the Hewlett-Packard Company Foundation in response to 2011 disasters:<sup>2</sup>

### 2011 donations for disaster relief [\$ USD]

Japan (earthquake/tsunami)	\$2,302,000
Thailand (flooding)	\$368,000
East Africa (drought)	\$300,000
United States (storms/tornadoes)	\$210,000
Australia (flooding)	\$100,000
Brazil (flooding)	\$100,000
New Zealand (earthquake)	\$100,000
Sri Lanka (flooding)	\$100,000
Turkey (earthquake)	\$50,000

# Performance

HP addresses critical social needs through a powerful union of innovation and collaboration, measuring our progress by the positive impact of our programs. In past years, we tracked the total amount invested by HP in our programs. In 2011, we began using metrics to measure new areas. The following are the current areas we measure:

- **Social impact** We measure how many people and places we impacted through our programs.
- **Business impact** We measure how our programs impact our competitive advantage and reputation.
- **Operational excellence** We track how many employees support our programs, on-time delivery of cash and product donations, and completion of milestones.

- **Financial impact** We track total investment by HP and funding by partners in support of our programs.
- The information we gather through this measuring process helps us strengthen our programs.

Although many benefits of our social innovation programs cannot be measured purely in terms of dollars spent or products and services donated, we understand the importance of tracking and reporting our financial investments. The total value of our social investments, including contributions from HP's business units for social projects, was approximately \$51.5 million USD in 2011.

<sup>1</sup> The Hewlett-Packard Company Foundation will match up to \$4 million USD in aggregate annually.  
<sup>2</sup> Figures are for the 2011 calendar year.

## Social investments, 2007–2011\* [\$ million USD]

	2007	2008	2009	2010	2011
<b>Overall</b>					
Total	\$49.8	\$52.5**	\$56.1	\$44.9**	\$51.5
Percentage of pretax profits	0.54%	0.50%	0.60%	0.41%	0.57%
<b>Type</b>					
Cash	\$23.3	\$24.9	\$21.1	\$27.3	\$20.3
Products and services***	\$26.5	\$27.5	\$35.0	\$17.7	\$31.2

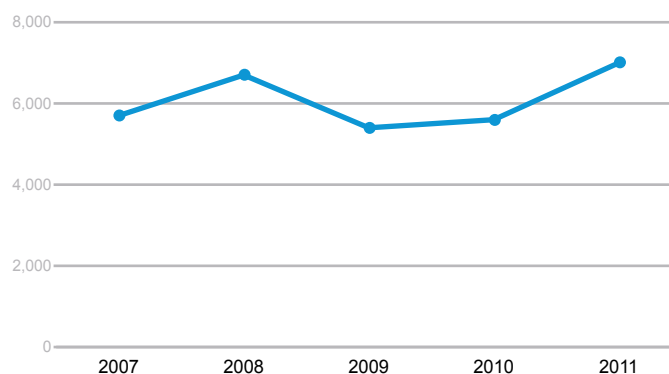
\* Data excludes contributions to the Hewlett-Packard Company Foundation and employee donations, but includes HP's matching contributions and contributions from the Hewlett-Packard Company Foundation to other organizations. Prior to 2010, HP did not report contributions from the Hewlett-Packard Company Foundation to other organizations as a part of this data. All years represented in this chart have been updated to reflect these contributions.

\*\* Due to rounding of this total, the sum of the constituent parts of this figure listed under the types of investments below does not match this figure.

\*\*\* Product donations are valued at the Internet list price. This is the price a customer would have paid to purchase the equipment through the HP direct sales channel on the Internet at the time the grant was processed.

We currently report employee volunteerism and contributions data for U.S. employees only.

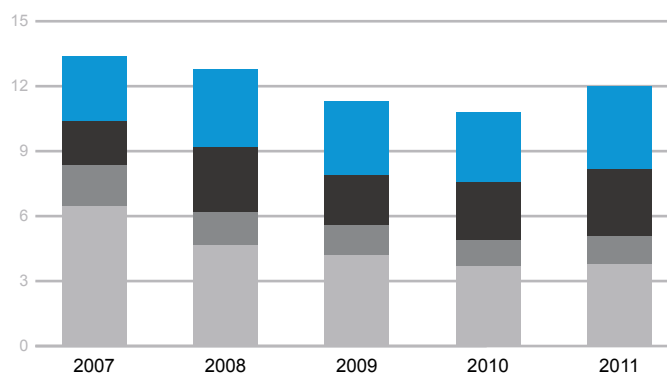
## Participation in the HP U.S. Employee Giving Program, 2007–2011 [number of employees]



— Participation in the HP U.S. Employee Giving Program	5,700	6,700	5,400	5,600	7,000
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## Cash and products donated by employees and HP and Hewlett-Packard Company Foundation matched funds\*

[\$ million USD]



<span style="color: blue;">■</span> Cash donated by U.S. employees**	\$3.0	\$3.6	\$3.4	\$3.2	\$3.8
<span style="color: darkgrey;">■</span> Cash from Hewlett-Packard Company Foundation matched funds	\$2.0	\$3.0	\$2.3	\$2.7	\$3.1
<span style="color: grey;">■</span> Value of products donated by U.S. employees***	\$1.9	\$1.5	\$1.4	\$1.2	\$1.3
<span style="color: lightgrey;">■</span> Value of products from HP matched funds***	\$6.5	\$4.7	\$4.2	\$3.7	\$3.8
<b>Total</b>	<b>\$13.4</b>	<b>\$12.8</b>	<b>\$11.3</b>	<b>\$10.8</b>	<b>\$12.0</b>

\* Hewlett-Packard Company Foundation cash matching began in 2007.

\*\* Does not reflect donations made to disaster relief efforts.

\*\*\* Product donations are valued at the Internet list price. This is the price a customer would have paid to purchase the equipment through the HP direct sales channel on the Internet at the time the grant was processed.

# Tech gallery: social innovation



HP innovations help address critical environmental and social challenges. We design with the environment in mind, and apply and scale technology to transform and improve how people live and work. This gallery is just a sampling.

HP leverages our expertise to help solve pressing social challenges. The following case studies showcase how we are using technology to address critical problems in education, entrepreneurship, and health.

## Mobile and cloud solutions

**Global Authentication Service** The Global Authentication Service allows patients to easily check the authenticity of their medications via mobile phone, using a code printed on their medication package. [Learn more.](#)

**Disease Surveillance** HP and Positive Innovation for the Next Generation (PING), the Botswana-based nongovernmental organization (NGO), developed a mobile phone app that provides Health Ministry officials in Botswana with vital information to track, respond to, and help prevent malaria epidemics. [Learn more.](#)

## Technology infrastructure

**Early Infant Diagnosis** The HP Early Infant Diagnosis (EID) project, created in collaboration with the [Clinton Health Access Initiative](#), uses HP data centers and technology to automate the HIV testing process, dramatically reducing turnaround times for test results and helping to save lives. [Learn more.](#)

**mothers2mothers** The South Africa-based NGO [mothers2mothers](#) (m2m) provides counseling and educational services to new mothers and HIV-positive pregnant women. HP is working with m2m to transform its information technology (IT) infrastructure and develop new, more efficient processes for information access and management. [Learn more.](#)

**ILA Trust** The [Ila Trust](#) brings healthcare via mobile medical units to very poor people in suburbs of New Delhi. HP helped equip mobile clinics to use electronic health records—providing better monitoring for patients who cannot afford hospitals. [Learn more.](#)

**Partners HealthCare** HP helped build Partners HealthCare, a powerful IT infrastructure with innovative software, ample storage memory, and processing power to support advances in genetic sequencing technologies. [Learn more.](#)

**HP Learning Initiative for Entrepreneurs (HP LIFE)** HP LIFE, the global, online training program, helps students, aspiring and established entrepreneurs, and small business owners develop the IT and business skills necessary to build successful companies and create jobs. [Learn more.](#)

## Research and innovation

**Patient-Centered Dashboard** HP, in collaboration with the Lucile Packard Children's Hospital at Stanford, created an electronic Patient-Centered Dashboard that helps prevent human error in medical settings. [Learn more.](#)

**Social Innovation Relay** The [Social Innovation Relay](#) allows young students the opportunity to think like social innovators and develop ideas to help solve some of the world's most pressing challenges. During the worldwide, interactive web-based competition, students receive mentoring from HP employees through virtual rooms. [Learn more.](#)

**HP Catalyst Initiative** The HP Catalyst Initiative works to transform teaching and learning in the areas of science, technology, engineering, and mathematics (STEM). HP provides technology and financial support to dedicated consortia to foster research in advancing STEM education worldwide. [Learn more.](#)



# Public policy

Sharing knowledge and experience with government officials and regulators is an important role for business, as industry insights can contribute to effective policies. HP engages with policy makers to pursue laws and regulations that encourage growth and innovation in a socially and environmentally responsible manner. HP's public policy work complies with all applicable laws and our [Standards of Business Conduct](#) (SBC).

## Policy priorities in 2011

Our public policy work focuses on the areas below. In addition, several themes cut across our priority areas, such as cloud computing, privacy and data security, and education. More detail on our policy positions and activities is available in our [global issue briefs](#).

### Tax and economic incentives

HP promotes tax policies and economic incentives that encourage innovation, growth, and job creation. We advocate comprehensive tax reform that will move the United States' worldwide tax system to a competitive territorial tax system, to help ensure U.S.-based companies like HP can compete in global markets. We also work with national governments to devise attractive incentives such as research and development credits to encourage companies to operate in those countries.

### Market access

Sixty-six percent of HP's sales were outside the United States in 2011. We support comprehensive and progressive trade agreements that include commitments to liberalize markets for our products and services and increase transparency in government procurement, regulations, and standards. We also support agreements that include strong commitments based on clear rules to protect intellectual property, labor standards, and the environment. In 2011, the United States Congress passed free trade agreements (FTAs) with Colombia, Panama, and South Korea. HP executives and employees supported these FTAs by writing more than 1,000 letters to members of Congress and composing opinion editorial pieces that were featured in local publications in Washington, D.C. HP strongly supported these trade agreements as they eliminate barriers to the spread of technology, enabling businesses to be more productive as well as encouraging economic growth and job creation.

### Intellectual property rights

Our business is based on innovation and relies on fair and efficient intellectual property protection. However, many current patent and copyright systems do not provide adequate protection for legitimate digital content distribution, so we support policy reform that provides a reasonable balance between the interests of consumers, technology equipment manufacturers, and intellectual property rights holders. We also support further reform to curb abusive patent litigation and strengthen the patent system in the United States. Additionally, we support the need for new, more effective systems for rights holders' compensation.

## Anti-counterfeiting

Counterfeiting poses a sizable challenge to HP globally and is more sophisticated and pervasive than ever before. It costs the information technology industry an estimated \$100 billion USD of annual revenue globally.<sup>1</sup> The sale of fake goods can damage our brand, and the loss of income lessens our ability to create jobs and develop new technological advancements. We work with law enforcement and government officials worldwide to help remove illicit goods from the market.

HP seeks to toughen laws and prosecute counterfeiters, whether small vendors or large manufacturers. We are focusing on countries in the Americas, the European Union (EU), the Middle East, Eastern Europe, and East Asia. We are forming country-specific partnerships to address the most pressing local concerns.

In 2011, we supported recently passed U.S. legislation that allows U.S. Customs to share information on suspected counterfeit imports with the rights holder. We also led initiatives around the world to educate government officials on the economic and social implications of allowing counterfeit products into a local marketplace.

## Social and environmental responsibility

HP continues to drive advancements in public policy that help address global environmental and social concerns. A few examples from 2011 include:

- Signing the [2°C Challenge Communiqué](#) produced by the Corporate Leaders Network for Climate Action, in advance of the COP17 United Nations Climate Change Conference in Durban, South Africa. Signed by hundreds of corporate leaders worldwide, the communiqué calls for international government action to stabilize global average surface temperatures at a maximum 2°C above preindustrial levels.
- Our response to the EU Commission's public consultation on cloud computing, which highlighted our work on [protecting privacy and personal data](#). Consultation responses will inform the European cloud computing strategy, due for publication in 2012.
- Our leadership in the development and support of a public/private alliance for the Democratic Republic of the Congo (DRC) focused on in-region minerals traceability and certification. We also worked hard to develop practical regulations aimed at creating transparency on the use of conflict minerals in products. In 2011, we supported the U.S. Congress, U.S. Securities and Exchange Commission, and U.S. Department of State on the implementation of the Dodd-Frank Act introduced in 2010. See [Conflict minerals on page 87](#) for full details.

## Memberships and coalitions

Most of our public policy engagement is carried out by our Government Relations team. In addition, industry associations provide a collective voice that can efficiently reach government officials. We list the major associations HP belongs to worldwide on our [Government Relations](#) website and disclose the proportion of our membership fees that each association in the United States used for lobbying purposes in 2011.

We enhance our work with key officials in regions where we have significant business interests by engaging external consultants, including professional contract lobbyists with particular expertise within their region. While not HP employees, they work with us closely and strictly adhere to regulations within their country or region, as well as HP's SBC.

## Political engagement

In 2011, HP contributed \$1,136,447 USD to state and local candidates, political memberships/sponsorships, and ballot measure campaigns in the United States. These contributions aligned with our policy positions and complied with HP's political guidelines, SBC, and applicable laws.

U.S. law prohibits corporate contributions to federal political candidates. However, eligible employees can make voluntary donations to the HP Political Action Committee (PAC) and legacy EDS PAC. These are separate legal entities from HP that contribute to campaigns for Democrat and Republican U.S. congressional candidates who share our policy views. In 2011, these PACs contributed a combined \$542,200 USD. HP does not make political contributions outside the United States.

See historical data in [Public policy on page 165](#).

Learn more on our [Government Relations](#) website:

- Policies for corporate and PAC political contributions
- Criteria and responsibilities for approving political contributions
- List of candidates that received corporate or PAC contributions in 2011
- List of section 527 organizations<sup>2</sup> that received contributions from HP in 2011

<sup>1</sup> [Managing the Risks of Counterfeiting in the Information Technology Industry](#), page 2, KPMG LLP and the Alliance for Gray Market and Counterfeit Abatement.

<sup>2</sup> The term "527 organization" refers to a U.S. political organization that is not regulated by the Federal Election Commission. These organizations are created under Section 527 of the Internal Revenue Code.





# Economic impacts

As the world's largest technology company, HP both contributes to economies worldwide and is influenced by broader economic factors and market trends.

Our economic contribution results directly from our financial transactions and indirectly as a broader result of our business.

- Direct impacts include customer sales as well as employee salaries, supplier and tax payments, shareholder dividends, and social investments.
- Indirect impacts occur when the money we spend circulates through the economy, for example when employees, suppliers, and investors spend their earnings from HP. In addition, HP [products and solutions](#) may help make businesses, health, and education systems more productive and profitable, while also saving money by decreasing energy use.

Economic trends that influence our business include the continuing rapid shift to an information economy and the burgeoning middle classes in emerging markets, which represent growth markets for our products and services.

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## Performance in fiscal year 2011

The table below outlines our direct and indirect economic impacts on each stakeholder group during fiscal year 2011 (FY11). The [data dashboard](#) summarizes HP's economic performance. For more details, please see our [financial statements](#), [interactive stock chart](#), and [annual report and 10-K](#).

Group	Direct economic impacts in FY11	Indirect economic impacts in FY11
Suppliers	HP made purchases from more than 1,000 production suppliers* and tens of thousands of <a href="#">nonproduction suppliers</a> worldwide.	Our spending continued to support employment in supplier companies. Additionally, suppliers and their workers pay taxes and support local economies, and suppliers may pay dividends to their investors.
Employees	HP provided compensation and benefits to nearly 350,000 <a href="#">employees</a> .**	HP's workforce grew by 8%, and those employees pay taxes and generate further economic activity by spending the money they earn.
Customers	HP's net revenue was \$127 billion USD.***	We continued to offer reliable, high-quality products and services to help customers improve productivity. For business customers, this may increase the employment they create and taxes they pay. Customers can save money through improved <a href="#">energy efficiency</a> .
Sales, marketing, and distribution partners	HP helped create business for sales and service partners worldwide.	Our partners' commercial relationships with HP can contribute to their growth.
Local, state, and national governments	HP paid net cash income taxes of \$1.134 billion USD.	Taxes paid help enable government spending and programs.
Local, regional, and national communities	HP invested \$51.5 million USD in cash, products, and services for nongovernmental organizations and communities.	Our social investment activities supported further economic activity by improving <a href="#">education</a> , <a href="#">employment</a> , and <a href="#">health</a> .
Investors	HP paid \$844 million USD in dividends to shareholders.	Investors may pay taxes on dividends.

\* HP uses the term "direct suppliers" in other sections of this report to include both "production suppliers" that provide materials for HP products and "nonproduction suppliers" that provide services related to HP products.

\*\* As of October 31, 2011.

\*\*\* FY11 non-GAAP net revenue includes an additional \$0.2 billion USD of revenue resulting from the exclusion of contra revenue associated with sales incentive programs implemented in the fourth quarter in connection with the wind down of HP's webOS device business, net of fourth quarter webOS device revenue. Non-GAAP earnings and operating profit information excludes after-tax costs of \$3.3 billion USD, or \$1.56 USD per diluted share, related to the wind down of HP's webOS device business, impairment of goodwill and purchased intangible assets, amortization of purchased intangible assets, restructuring charges, and acquisition-related charges.

# Data dashboard: society



Supply chain responsibility	2007	2008	2009	2010	2011
<b>Suppliers engaged in SER program</b> [total, cumulative]	601	631	716	879	907
<b>SER audits conducted</b> [total, cumulative]	354	486	591	681	760
Initial audits [total, cumulative]	204	236	261	294	329
Follow-up audits [total, cumulative]	144	220	291	319	339
Full re-audits [total, cumulative]	6	30	39	68	92
<b>Audit findings (See <a href="#">Detailed audit findings on page 102</a>)</b>					
Suppliers engaged in capability building [total, cumulative]	32	55	68	80	126
U.S. purchasing with small businesses* [\$ million USD]	\$3,106	\$3,365	\$3,691	\$4,316	\$4,400
U.S. purchasing with minority-owned businesses*,** [\$ million USD]				\$827	\$733
U.S. purchasing with women-owned businesses*,** [\$ million USD]				\$861	\$476

\* All figures are for U.S. purchases from U.S.-based businesses. Data is for the 12-month period ending September 30 of the year noted. Data beginning in 2009 includes HP Enterprise Services (formerly EDS) spending. Data prior to 2009 does not.

\*\* HP did not report this metric prior to 2010, so data before that year is not available. Beginning in 2011, we did not allow companies to be counted in both the minority-owned businesses and women-owned businesses categories, which decreased the total amounts compared with the prior year.

HP people	2007	2008	2009	2010	2011
<b>Number of HP employees (approximate)*</b>	172,000	321,000	304,000	325,000	350,000
<b>Worldwide workforce demographics—employees**</b> [women as a percentage of total employees]					
Americas	31.0%	30.8%	35.0%	34.3%	33.3%
Europe, Middle East, and Africa	28.4%	28.1%	30.0%	30.5%	29.8%
Asia Pacific and Japan	30.0%	30.9%	32.5%	33.1%	32.3%
Worldwide	30.0%	30.1%	32.9%	32.9%	32.0%
<b>Worldwide workforce demographics—managers**</b> [women as a percentage of total managers]					
Americas	25.3%	25.2%	28.3%	27.8%	28.7%
Europe, Middle East, and Africa	17.6%	18.5%	20.0%	19.8%	20.9%
Asia Pacific and Japan	18.6%	20.2%	21.2%	21.8%	22.3%
Worldwide	21.5%	22.0%	24.3%	24.1%	24.8%
<b>Global new hires, by gender***</b> [as a percentage of total]					
Female	31.8%	34.9%	35.6%	35.2%	32.7%
Male	68.2%	65.1%	64.4%	64.8%	67.3%
<b>U.S. workforce demographics (See <a href="#">Diversity and inclusion on page 125</a> for detailed data)</b>					
<b>U.S. new hires, by ethnicity****</b> [as a percentage of total]					
White	69.0%	67.2%	65.0%	61.7%	52.4%
All minorities	30.1%	32.4%	34.5%	34.8%	31.1%
Black	6.8%	8.1%	11.2%	14.5%	7.7%
Hispanic	6.3%	6.9%	7.1%	7.1%	6.7%
Asian	16.5%	15.7%	12.5%	10.5%	14.6%
Native American	0.5%	0.6%	0.7%	0.3%	0.4%
<b>Lost workday case rate†</b>					
Global	0.10	0.07	0.08	0.10	0.09
Americas	0.16	0.13	0.17	0.16	0.13
Europe, Middle East, and Africa	0.14	0.08	0.04	0.11	0.11
Asia Pacific and Japan	0.01	0.01	0.01	0.02	0.01

HP people	2007	2008	2009	2010	2011
<b>Recordable incidence rate<sup>††</sup></b>					
Global	0.38	0.31	0.30	0.24	0.22
Americas	0.75	0.66	0.57	0.43	0.41
Europe, Middle East, and Africa	0.30	0.25	0.29	0.18	0.17
Asia Pacific and Japan	0.04	0.05	0.03	0.03	0.02

<sup>\*</sup> As of October 31 of the year noted. Numbers are rounded.

<sup>\*\*</sup> 2009 data excludes Brazil.

<sup>\*\*\*</sup> 2009 data excludes Brazil and reflects the time period January 1, 2009, to November 30, 2009.

<sup>\*\*\*\*</sup> Sum of "White" and "All minorities" does not equal 100%, and the sum of "Black," "Hispanic," "Asian," and "Native American" does not equal the total for "All minorities" due to people who do not declare or who do not fall into these categories. "White" and "Black" figures for 2011 are markedly lower from previous years, as 16.1% of respondents placed themselves in a new "Other" category, which does not allow identification by ethnicity.

<sup>†</sup> Lost workday case rate is the number of work-related injuries that result in time away from work per 100 employees working a full year. The U.S. industry average in 2009 was 0.3 (2010 data did not include the North American Industry Classification System code used in previous years. Thus, 2009 data was used because it was the most recent available). Americas includes incidents occurring in Argentina, Brazil, Canada, Panama, Puerto Rico, and the United States. Europe, Middle East, and Africa includes incidents occurring in Belgium, France, Germany, Israel, Italy, Morocco, Netherlands, Poland, Spain, and the United Kingdom. Asia Pacific and Japan includes incidents occurring in Japan and Singapore.

<sup>††</sup> Recordable incidence rate is the number of all work-related lost-time and no-lost-time cases requiring more than first aid per 100 employees working a full year. The U.S. industry average in 2009 was 0.5 (2010 data did not include the North American Industry Classification System code used in previous years. Thus, 2009 data was used because it was the most recent available). Americas includes incidents occurring in Argentina, Brazil, Canada, Mexico, Panama, Puerto Rico, the United States, and Venezuela. Europe, Middle East, and Africa includes incidents occurring in Belgium, France, Germany, Ireland, Israel, Italy, Morocco, Netherlands, Poland, Spain, Switzerland, and the United Kingdom. Asia Pacific and Japan includes incidents occurring in Australia, India, Japan, Singapore, and South Korea.

Social innovation	2007	2008	2009	2010	2011
<b>Social investments<sup>*</sup> [\$ million USD]</b>	\$49.8	\$52.5	\$56.1	\$44.9	\$51.5
Cash	\$23.3	\$24.9	\$21.1	\$27.3	\$20.3
Products and services <sup>**</sup>	\$26.5	\$27.5	\$35.0	\$17.7	\$31.2
<b>Social investments, percentage of pre-tax profits</b>	0.54%	0.50%	0.60%	0.41%	0.57%
<b>Participation in the HP U.S. Employee Giving Program</b> [number of employees]	5,700	6,700	5,400	5,600	7,000
<b>Cash and products donated by employees and HP and Hewlett-Packard Company Foundation matched funds<sup>***</sup></b> [\$ million USD]	\$13.4	\$12.8	\$11.3	\$10.8	\$12.0
Cash donated by U.S. employees <sup>****</sup>	\$3.0	\$3.6	\$3.4	\$3.2	\$3.8
Cash from Hewlett-Packard Company Foundation matched funds	\$2.0	\$3.0	\$2.3	\$2.7	\$3.1
Value of products donated by U.S. employees <sup>**</sup>	\$1.9	\$1.5	\$1.4	\$1.2	\$1.3
Value of products from HP matched funds <sup>**</sup>	\$6.5	\$4.7	\$4.2	\$3.7	\$3.8

<sup>\*</sup> Data excludes contributions to the Hewlett-Packard Company Foundation and employee donations, but includes HP's matching contributions and contributions from the Hewlett-Packard Company Foundation to other organizations. Prior to 2010, HP did not report contributions from the Hewlett-Packard Company Foundation to other organizations as a part of this data. All years represented in this chart have been updated to reflect these contributions. Some segments do not add up to total due to rounding.

<sup>\*\*</sup> Product donations are valued at the Internet list price. This is the price a customer would have paid to purchase the equipment through the HP direct sales channel on the Internet at the time the grant was processed.

<sup>\*\*\*</sup> Hewlett-Packard Company Foundation cash matching began in 2007.

<sup>\*\*\*\*</sup> Does not reflect donations made to disaster relief efforts.

Public policy	2007	2008	2009	2010	2011
Contributions to U.S. state and local candidates, political memberships/sponsorships, and ballot measure campaigns [\$ USD]	\$888,416	\$1,035,650	\$1,052,400	\$1,284,900	\$1,136,447
HP Political Action Committee contributions* [\$ USD]	\$225,300	\$219,600	\$260,000	\$378,000	\$542,200

\* Reflects combined HP Political Action Committee and legacy EDS Political Action Committee contributions.

Economic impacts	2007	2008	2009	2010	2011
Net revenue [\$ million USD]			\$114,552	\$126,033	\$127,245
Net investment in property, plant, and equipment [\$ million USD]			\$3,200	\$3,531	\$3,540
Research and development spending [\$ million USD]			\$2,819	\$2,959	\$3,254
Number of patents (total, approximate)			33,000	37,000	36,000
401(k) expense* [\$ million USD]			\$568	\$535	\$626
Advertising cost [\$ million USD]			\$700	\$1,000	\$1,200
Total dividend payments [\$ million USD]			\$766	\$771	\$844
Share repurchases [\$ million USD]			\$5,140	\$11,042	\$10,117

\* HP match and expenses for employee 401(k) retirement accounts.



# Goals: society

## Ethics and human rights

### Ethics and compliance

Year	Goal
2011	<p>Continue to increase the volume of consulting matters.</p> <p><b>Progress:</b> We increased the volume of consulting matters by 34.8% in 2011, compared with 2010. This resulted from a widespread internal communication campaign.</p> <hr/> <p>Further improve quality of communications and training, including “tone at the top.”</p> <p><b>Progress:</b> In 2011, we refreshed our ethics and compliance training for new employees and introduced tailored training for country managers and salespeople. See <a href="#">Communication and training on page 83</a> for details.</p> <hr/> <p>Conduct wellness assessments for 44* compliance functions and manage remediation plans to completion.</p> <p><b>Progress:</b> In 2011, the Compliance Office continued to assess the maturity of compliance functions throughout our business and regions against predefined standards. This process identifies new legal risks and tracks progress against recommendations identified during our “wellness assessment” process, which began in 2009.</p> <hr/>
2012	<p>Assess effectiveness of training and consulting programs.</p> <hr/> <p>Lead growth market compliance.</p> <hr/> <p>Improve localization of training and programs.</p> <hr/> <p>Begin expanding Wellness Assessments to HP subsidiaries.</p> <hr/> <p>Mature HP’s human rights program to mirror other compliance programs.</p> <hr/>

\*During 2011, several new compliance functions were added but the total number of compliance functions at HP changed from 47 to 44 due to the consolidation of several functions.

## Conflict minerals

Year	Goal
2011	<p>Actively participate in the pilot program implementation of the Organisation for Economic Co-operation and Development (OECD) Due Diligence Guidance* to support broad use and best-practice development.</p> <p><b>Progress:</b> We are participating in a 1-year pilot implementation to test the guidance, and will provide feedback to the OECD through a series of three questionnaires and in-person multi-stakeholder meetings.</p>

\*Organisation for Economic Co-operation and Development (OECD) [Due Diligence Guidance for responsible supply chains of minerals from conflict-affected and high-risk areas](#).

## Supply chain responsibility

Year	Goal
2011	<p>Train more than 13,000 workers (cumulative) in HP's Electronic Industry Citizenship Coalition (EICC) Code of Conduct labor rights.</p> <p><b>Progress:</b> Achieved. HP reached more than 16,800 workers by the end of 2011.</p>
	<p>Launch predeparture training for suppliers and schools to address the emerging issue of recruiting new hires from vocational training schools.</p> <p><b>Progress:</b> Achieved. In 2011, more than 9,000 graduates and almost 4,000 student workers completed predeparture training.</p>
	<p>Expand public health training, including the HERproject, anti-discrimination training, and hepatitis B prevention, to an additional 20,000 workers.</p> <p><b>Progress:</b> Achieved. HP reached 50,000 new workers in 2011.</p>
	<p>Increase social and environmental responsibility (SER) awareness and introduce capability building to 25 nonproduction suppliers in each of China and India.</p> <p><b>Progress:</b> Twenty-one nonproduction suppliers joined capability building programs in China and 10 suppliers joined in India.</p>
	<p>Suppliers representing 50% of high-risk production spend will report on key performance indicators.</p> <p><b>Progress:</b> Achieved.</p>

Year	Goal
2012	<p><b>Transparency</b></p> <hr/> <p>Promote supplier SER ownership and transparency by engaging with suppliers representing 90% of final assembly spend to develop strategies and/or participate in training for publication of Global Reporting Initiative (GRI)–based annual corporate social responsibility reports. (See <a href="#">Supplier list</a> for information on which suppliers currently publish GRI-based reports.)</p> <hr/> <p><b>Outreach</b></p> <hr/> <p>Advance outreach efforts by formalizing our supply chain SER partnership with multi-stakeholder programs and/or governments in high-risk areas.</p> <hr/> <p>Promote worker rights awareness and grievance mechanisms in emerging supply chain regions.</p> <hr/> <p><b>Performance management</b></p> <hr/> <p>Extend the reach of our highest-priority supplier improvement programs by requiring 75% of high-risk production suppliers (by spend) with working hours major nonconformances to report on key performance indicators.*</p> <hr/> <p>Expand our audit program by increasing the number of supplier audits by 40% from 2011 levels and reaching 850 cumulative audits.</p> <hr/> <p>Expand the scope of our nonproduction audit program by performing audits in new geographic regions.</p> <hr/> <p>Standardize auditor capabilities by ensuring 100% of HP lead auditors are trained in the Electronic Industry Citizenship Coalition (EICC) Global e-Sustainability Initiative (GeSI) Labor and Ethics Lead Auditor course, and pursuing certification of all HP lead auditors to the International Register of Certified Auditors (IRCA) EICC-GeSI Auditor Certification.</p> <hr/> <p>Promote conformance to SER standards further down in the supply chain by validating that 75% of high-risk production suppliers (by spend) have SER programs in place with their suppliers.*</p> <hr/>

\*Goal reworded from previous years for clarity.

## Supplier diversity

Year	Goal
2011	<p>Increase the number of suppliers reporting Tier II diverse spending.</p> <p><b>Progress:</b> Achieved. Reported Tier II diverse spending increased 9.5% in 2011 compared with 2010.</p> <hr/> <p>Expand Global Supplier Diversity programs outside the United States.</p> <p><b>Progress:</b> Achieved (see <a href="#">Supplier diversity on page 115</a>). We have increased local employee participation in supplier diversity events.</p> <hr/> <p>Institute pan-HP Global Supplier Diversity Ambassadors Council to support Global Supplier Diversity initiatives and outreach.</p> <p><b>Progress:</b> Achieved. We also introduced a Global Governance Council in 2012 to ensure compliance with global public sector enterprise customer needs.</p>
2012	<p>Increase the number of suppliers reporting Tier II diverse spending and the total amount of spend.</p>

## Privacy

Year	Goal
2011	<p>Deploy a clear, simplified privacy notice to improve transparency.</p> <p><b>Progress:</b> We introduced quick links to make our online privacy policy easier to navigate and read.</p> <hr/> <p>Mandate the companywide use of the HP Privacy Advisor tool to improve compliance.</p> <p><b>Progress:</b> HP Privacy Advisor has been implemented companywide.</p> <hr/> <p>Address high-risk areas identified by the Privacy and Data Protection Board (PDPB) through the integration of HP's Privacy Assurance audit capabilities.</p> <p><b>Progress:</b> Four priority areas identified by the PDPB have been addressed through our Privacy Assurance program, Privacy by Design, and HP Privacy Advisor. See <a href="#">Privacy on page 117</a> for full details.</p> <hr/> <p>Obtain HP Internal Audit certification for the Privacy Assurance program.</p> <p><b>Progress:</b> Achieved.</p>
2012	<p>Continue to participate in key privacy initiatives to expand external thought leadership and drive next-generation policies and practices, working with regulators, nongovernmental organizations, and industry. Our aim is to advance new concepts of accountability and to further develop meaningful choice and protection for consumers that also allows companies to innovate.</p> <hr/> <p>Participate in the international implementation of the Asia-Pacific Economic Cooperation Cross-Border Privacy Rules.</p> <hr/> <p>Integrate current HP Records Management team into the HP Privacy Office to create a Privacy and Information Management organization.</p>

# HP people

## Engaging our people

Year	Goal
2011	<p>Align all recognition initiatives to a global framework, make best practices in recognition training available to all managers, encourage managers to use both nonmonetary and eAwards to recognize employee contributions, and encourage and support peer recognition.</p> <p><b>Progress:</b> Achieved</p> <hr/> <p>Improve employee engagement as measured by Voice of the Workforce scores.</p> <p><b>Progress:</b> Achieved</p>
2012	<p>Increase employee engagement by 5% as measured by the Employee Engagement Index (EEI).*</p> <hr/> <p>Increase HP vs. industry score on “Recommend HP as a great place to work.”</p>

\*HP's EEI is a set of survey questions that rate employees' experiences related to productivity and engagement, measured in HP's annual Voice of the Workforce (VoW) survey.

## Building careers

Year	Goal
2011	<p>Drive next-generation learning strategies and enhance learning at HP by increasing the number of solutions with manager coaching, mentoring, and new technologies, and increasing reach of training to 100%.</p> <p><b>Progress:</b> Achieved</p> <hr/> <p>Enable corporate transformations in supply chain, sales, and emerging markets groups by showing the business impact of learning solutions.</p> <p><b>Progress:</b> Achieved</p> <hr/> <p>Deliver rapid, effective on-boarding and manager training, aligned to business priorities as measured by exceeding learner and instructor evaluation metrics.</p> <p><b>Progress:</b> Achieved</p>
2012	<p>Develop and deliver world-class learning across onboarding, leadership, sales, professional skills, and technical development priorities.</p> <hr/> <p>Drive next-generation learning strategies through learning and development innovation, technology, and tools.</p>

## Diversity and inclusion

Year	Goal
2011	Hold six face-to-face diversity leadership summits at HP locations worldwide. <b>Progress:</b> Achieved
2012	Expand global focus on diverse talent to align with business need.  Broaden focus on inclusion to drive employee engagement.

## Health and safety

Year	Goal
2011	Improve risk identification, auditing, and issue resolution at HP sites through our new global assurance initiative.  <b>Progress:</b> Achieved. Implemented a worldwide site ranking system and standardized audit templates to guide our Environment, Health, and Safety (EHS) auditing activities, established a central issue management tool to analyze results and track resolution, and provided auditor training to our world-wide EHS staff.

## Social innovation

Year	Goal
2011	Build on the progress and experience of project implementation in 2010 by scaling and replicating flagship programs.  <b>Progress:</b> We scaled, expanded, and replicated several programs, including Early Infant Diagnosis, Global Authentication Service, HP Catalyst Initiative, HP Learning Initiative for Entrepreneurs (HP LIFE), and Social Innovation Relay.
	Expand and accelerate our collaborative efforts to define, develop, and implement new and/or enhanced solutions for global health (in support of <a href="#">Millennium Development Goals</a> 4, 5, and 6).  <b>Progress:</b> <ul style="list-style-type: none"> <li>• <b>Millennium Development Goal 4</b> (<a href="#">reducing child mortality</a>) HP continued its work with the Clinton Health Access Initiative to expand the Early Infant Diagnosis program to Uganda. We also developed an electronic patient-centered dashboard to help prevent human error in medical settings.</li> <li>• <b>Millennium Development Goal 5</b> (<a href="#">improving maternal health</a>) HP continued to support mothers2mothers by implementing an electronic database to help improve efficiency across the organization.</li> <li>• <b>Millennium Development Goal 6</b> (<a href="#">combating HIV/AIDS, malaria, and other diseases</a>) HP and Positive Innovation for the Next Generation created a mobile app in Botswana and Kenya to track, respond to, and help prevent malaria epidemics. We continued to expand the Global Authentication Service, and in 2011 announced availability in India, allowing more people to verify the authenticity of their medication. We partnered with SafePoint Trust to develop a software platform to encourage medical staff to use a syringe only once and then discard it.</li> </ul>



Year	Goal
2011	<p>Engage senior HP leadership to communicate HP's renewed commitment to global community involvement through pro bono and skill-based volunteering.</p> <p><b>Progress:</b> Our senior leaders established pro bono programs in various countries, including Canada, China, Mexico, Singapore, the United Kingdom, and the United States.</p> <hr/> <p>Create necessary infrastructure, tools, metrics, and partnerships to enable strategic community involvement throughout the company at local, country, regional, and corporate levels.</p> <p><b>Progress:</b> We launched the Social Impact portal and network to help employees find volunteer opportunities. Moreover, the vast majority of HP employees are in a country with a Social Impact lead who helps identify volunteer opportunities that match an employee's interests.</p> <hr/> <p>Pilot various signature programs that recognize HP employees' commitment to communities around the world.</p> <p><b>Progress:</b> We launched a new human resources pro bono program in China, where HP volunteers used their expertise in technology, engineering, human resources, manufacturing, and other areas to help local communities.</p> <hr/> <p>Collaborate with global education leaders to improve educational opportunity, quality, and outcome in STEM+ education.</p> <p><b>Progress:</b> We expanded the HP Catalyst Initiative consortia by adding 21 new organizations.</p> <hr/> <p>Reward solutions and create new models that incubate the innovative use of technology in formal and informal education.</p> <p><b>Progress:</b> We added a new consortium, STEM-preneur, and supported new education experiences in rural and urban settings.</p> <hr/> <p>Build capacity in entrepreneurship education through the HP Learning Initiative for Entrepreneurs (HP LIFE) and the partnership with Junior Achievement (JA).</p> <p><b>Progress:</b> We added 40 new training centers in 2011—expanding the HP LIFE program to 340 training centers in 49 countries. HP LIFE continued to develop strong online and offline learning content in a variety of different languages. JA and HP launched the interactive, web-based competition Social Innovation Relay. In its first year, nearly 10,000 students across 11 countries participated.</p>

# About this report

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This report provides an in-depth look into HP's global citizenship policies, programs, and performance through 2011. Each year, we report on the progress we've made toward our goals and include perspectives from external stakeholders about our global citizenship efforts.



174	Overview
175	Assurance
176	UN Global Compact
177	GRI index

# Overview

This report describes HP's global citizenship policies, programs, and performance through the 2011 fiscal year (which ended October 31, 2011). It is intended for people seeking in-depth information in these areas, including customers, industry analysts, socially responsible investors, nongovernmental organizations, employees, and sustainability specialists. Our [global citizenship website](#) provides summary information for readers seeking an overview of our approach and performance.

We report yearly to reflect our progress, changes to our business, emerging issues, and stakeholder feedback. We consider external standards such as the Global Reporting Initiative and the United Nations Global Compact, as well as reporting trends and best practices.

Previous reports are available from the [downloads](#) page of our global citizenship website.

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## Reference pages

The pages listed below provide quick access to commonly requested information.

In this report:

- [Assurance on page 175](#)
- [Data dashboard: environment on page 69](#) and [Data dashboard: society on page 162](#)
- [GRI index on page 177](#)
- [UN Global Compact on page 176](#)

On our global citizenship website:

- [Affiliations and memberships](#)
- [Awards](#)
- [Tech gallery](#)
- [Perspectives](#)
- [Policies](#)

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## Scope, dates, and measures

- The information in this report is current as of the date of its initial publication. This report has not been updated to reflect any changes that may have occurred after such date, including, among other things, any changes to HP's business or strategy. HP assumes no obligation and does not intend to update this report to reflect any such changes.

- The information on this site covers all HP operations, but does not cover joint ventures.
- All references to years are to HP's fiscal year, which ends October 31, unless otherwise stated.
- All references to dollars are to U.S. dollars (USD).
- "Tonnes" refers to metric tonnes. (One metric tonne is equivalent to 2,205 pounds.)

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## Metrics and goals

The metrics and goals in this report are established by the HP teams responsible for measuring and achieving them, in consultation with internal, and in some cases external, stakeholders, and with reference to leading practices. This ensures our metrics provide a meaningful and balanced picture of HP's performance, and that our goals are realistic yet challenging.

Collecting data from hundreds of sites worldwide is complex, and the process can vary by business unit, function, and geography. As a result, it can be difficult to define and implement measures for the whole company. We continue to work on standardizing our measurement systems and metrics. Data is rounded as needed to reflect the appropriate level of certainty.

Another challenge is to report performance beyond our immediate operations. For example, we must make assumptions when estimating [product energy consumption](#) and the resulting greenhouse gas (GHG) emissions, or the percentage of HP products sold that are [recycled](#).

Wherever possible, we describe the context for performance data so readers can understand any limitations and draw appropriate conclusions.

See [Data dashboard: environment on page 69](#) and [Data dashboard: society on page 162](#) for more detail.

## Your feedback

We welcome feedback and consider it when reviewing our approach and reporting our performance for subsequent years. We invite readers to provide feedback on our global citizenship activities and this report using our [online form](#).

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## Forward-looking statements

This report contains forward-looking statements that involve risks, uncertainties, and assumptions. If the risks or uncertainties ever materialize or the assumptions prove incorrect, the results of HP

may differ materially from those expressed or implied by such forward-looking statements and assumptions. All statements other than statements of historical fact are statements that could be deemed forward-looking statements, including but not limited to statements of the plans, strategies, and objectives of management for future operations, including the expected development, implementation, and achievement of environmental, social, and governance policies, goals, and objectives; statements concerning the existing or expected development, performance, addressable market, or market share relating to products or services and the impact of those products and services on global issues, the environment, and other elements of society; statements regarding current or future macroeconomic or market trends and events and the impact of those trends and events on HP and its financial performance; statements about the merits of an investment in HP securities; any statements of expectation or belief; and any statements of assumptions underlying any of the foregoing. Risks,

uncertainties, and assumptions include the impact of macroeconomic, market, and geopolitical trends and events; the development and transition of new products and services, and the enhancement of existing products and services to meet customer needs and respond to emerging technological or other trends; the competitive pressures faced by HP's businesses; the protection of HP's intellectual property assets, including intellectual property licensed from third parties; integration and other risks associated with business combination and investment transactions; the hiring and retention of key employees; expectations and assumptions relating to the execution and timing of cost reduction programs and restructuring and integration plans; the resolution of pending investigations, claims and disputes; and other risks that are described in HP's filings with the Securities and Exchange Commission, including HP's Annual Report on Form 10-K for the fiscal year ended October 31, 2011. HP assumes no obligation and does not intend to update these forward-looking statements.

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# Assurance

We realize that many readers seek assurance that the information we provide in our report is an accurate and complete reflection of our performance. Our approach combines external verification of selected content, other forms of external review, and assessment by HP's internal audit group.

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## External verification

We provide external verification for information in three focus areas:

- **Greenhouse gas (GHG) emissions** In addition to an internal review, we commission independent auditor Bureau Veritas Certification to verify our global GHG emissions measurements and annual reporting under the GHG measurement and reporting protocols of the World Resources Institute and World Economic Forum. Learn more in [Energy and GHG emissions on page 53](#).
- **Product reuse and recycling** In 2011, HP completed its fourth round of reuse and recycling vendor audits under its expanded program guidelines. Our third-party auditing firm, Environmental Resources Management (ERM), assessed 14 reuse and 39 recycling vendor facilities in 24 countries. Learn more in [Vendor audits on page 51](#).
- **Supply chain responsibility** HP engages third-party audit firms to conduct verification audits of our suppliers. These include suppliers associated with a specific allegation in nongovernmental organization reports. We also use third-party audit findings to validate our internal audit results. Learn more in [Our approach on page 96](#).

## Other external reviews

As part of HP's global ISO 14001 and site Occupational Health and Safety Assessment Series (OHSAS) 18001 registrations, we are assessed by independent, accredited auditors, including Bureau Veritas Certification and BSI Management Systems.

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## Internal Audit

HP Internal Audit assesses risk and evaluates control environments for several operations, including, but not limited to, financial transactions and reporting, systems security, and process flows. However, compliance and ethics, privacy, and environment, health, and safety may be evaluated, depending on the nature of the operation being audited.

In addition, qualified HP professionals conduct internal audits of the environmental, health, and safety management systems at our operations, and we report the results to senior management.

# UN Global Compact

HP is a signatory to the [United Nations Global Compact](#), a set of voluntary commitments for companies to improve human rights, labor conditions, the environment, and anti-corruption controls. Our president and chief executive officer, Meg Whitman, expresses

HP's support for the Global Compact in her [executive letter](#). The table below links to the sections of this report that address the Global Compact's ten principles.




Principle	Information in report
<b>Human rights</b>	
Principle 1: Businesses should support and respect the protection of internationally proclaimed human rights.	<a href="#">Human rights on page 85</a> <a href="#">Conflict minerals on page 87</a> <a href="#">Supply chain responsibility on page 91</a> <a href="#">HP people on page 120</a> <a href="#">Privacy on page 117</a>
Principle 2: Make sure that they are not complicit in human rights abuses.	<a href="#">Human rights on page 85</a> <a href="#">Conflict minerals on page 87</a> <a href="#">Supply chain responsibility on page 91</a>
<b>Labor standards</b>	
Principle 3: Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;	<a href="#">Human rights on page 85</a> <a href="#">Supply chain responsibility on page 91</a>
Principle 4: the elimination of all forms of forced and compulsory labor;	<a href="#">Human rights on page 85</a> <a href="#">Supply chain responsibility on page 91</a>
Principle 5: the effective abolition of child labor; and	<a href="#">Human rights on page 85</a> <a href="#">Supply chain responsibility on page 91</a>
Principle 6: the elimination of discrimination with respect to employment and occupation.	<a href="#">Human rights on page 85</a> <a href="#">Supply chain responsibility on page 91</a> <a href="#">Diversity and inclusion on page 125</a>
<b>Environment</b>	
Principle 7: Businesses should support a precautionary approach to environmental challenges;	<a href="#">Materials on page 36</a>
Principle 8: undertake initiatives to promote greater environmental responsibility; and	<a href="#">Environmental sustainability on page 19</a> <a href="#">Products and solutions on page 29</a> <a href="#">Product reuse and recycling on page 47</a> <a href="#">HP operations on page 52</a> <a href="#">Supply chain responsibility on page 91</a>
Principle 9: encourage the development and diffusion of environmentally friendly technologies.	<a href="#">Products and solutions on page 29</a> <a href="#">HP operations on page 52</a>
<b>Anti-corruption</b>	
Principle 10: Businesses should work against all forms of corruption, including extortion and bribery.	<a href="#">Ethics and compliance on page 82</a> <a href="#">Supply chain responsibility on page 91</a>













# GRI index

We considered the Global Reporting Initiative (GRI) Sustainability Reporting Guidelines (G3) when preparing this report. HP self-declares this report to GRI Application Level B, as stated in the table below.

GRI Guidelines Application Level	C	B	A
Self-declared		X	

Key
 Full coverage
 Partial coverage
 No coverage

GRI guideline	Coverage	Location within report
<b>Vision and strategy</b>		
1.1 Statement from the most senior decision maker of the organization about the relevance of sustainability to the organization and its strategy.		<a href="#">Letter from CEO Meg Whitman on page 4</a>
1.2 Description of key impacts, risks, and opportunities.		<a href="#">Global citizenship strategy on page 7</a> Performance and challenges are described throughout the report
<b>Organizational profile</b>		
2.1 Name of the organization.		<a href="#">HP profile on page 5</a>
2.2 Primary brands, products, and/or services.		<a href="#">HP profile on page 5</a>
2.3 Operational structure of the organization, including main divisions, operating companies, subsidiaries, and joint ventures.		<a href="#">HP profile on page 5</a> <a href="#">HP 2011 Annual Report</a>
2.4 Location of organization's headquarters.		<a href="#">HP profile on page 5</a>
2.5 Number of countries where the organization operates, and names of countries with either major operations or that are specifically relevant to the sustainability issues covered in the report.		<a href="#">HP profile on page 5</a> <a href="#">HP list of major operations on page 65</a> <a href="#">Detailed audit findings on page 102</a>
2.6 Nature of ownership and legal form.		<a href="#">HP profile on page 5</a>
2.7 Markets served (including geographic breakdown, sectors served, and types of customers/beneficiaries).		<a href="#">HP profile on page 5</a>
2.8 Scale of the reporting organization.		<a href="#">HP profile on page 5</a>
2.9 Significant changes during the reporting period regarding size, structure, or ownership.		<a href="#">HP 2011 Annual Report</a>
2.10 Awards received in the reporting period.		<a href="#">News and awards</a>



GRI guideline		Coverage	Location within report
<b>Report parameters</b>			
3.1	Reporting period (e.g., fiscal/calendar year) for information provided.	■	<a href="#">Overview on page 174</a>
3.2	Date of most recent previous report (if any).	■	<a href="#">Downloads</a>
3.3	Reporting cycle (annual, biennial, etc.).	■	<a href="#">Overview on page 174</a>
3.4	Contact point for questions regarding the report or its contents.	■	<a href="#">Feedback</a>
3.5	Process for defining report content.	■	<a href="#">Global citizenship strategy on page 7</a> <a href="#">Overview on page 174</a>
3.6	Boundary of the report (e.g., countries, divisions, subsidiaries, leased facilities, joint ventures, suppliers).	■	<a href="#">Overview on page 174</a> <a href="#">HP list of major operations on page 65</a> <a href="#">Detailed audit findings on page 102</a>
3.7	State any specific limitations on the scope or boundary of the report.	■	<a href="#">Overview on page 174</a> <a href="#">Data dashboard: environment on page 69</a> <a href="#">Data dashboard: society on page 162</a>
3.8	Basis for reporting on joint ventures, subsidiaries, leased facilities, outsourced operations, and other entities that can significantly affect comparability from period to period and/or between organizations.	■	<a href="#">Overview on page 174</a>
3.9	Data measurement techniques and the bases of calculations, including assumptions and techniques underlying estimations applied to the compilation of the indicators and other information in the report.	■	<a href="#">Data dashboard: environment on page 69</a> <a href="#">Data dashboard: society on page 162</a> Noted in relevant sections as appropriate
3.10	Explanation of the effect of any restatements of information provided in earlier reports, and the reasons for such restatement (e.g., mergers/acquisitions, change of base years/periods, nature of business, measurement methods).	■	<a href="#">Data dashboard: environment on page 69</a> <a href="#">Data dashboard: society on page 162</a> Noted in relevant sections as appropriate
3.11	Significant changes from previous reporting periods in the scope, boundary, or measurement methods applied in the report.	■	<a href="#">Data dashboard: environment on page 69</a> <a href="#">Data dashboard: society on page 162</a>
3.12	Table identifying the location of the standard disclosures in the report.	■	<a href="#">GRI index on page 177</a>
3.13	Policy and current practice with regard to seeking external assurance for the report. If not included in the assurance report accompanying the sustainability report, explain the scope and basis of any external assurance provided. Also explain the relationship between the reporting organization and the assurance provider(s).	■	<a href="#">Assurance on page 175</a>

GRI guideline		Coverage	Location within report
<b>Governance</b>			
4.1	Governance structure of the organization, including committees under the highest governance body responsible for specific tasks, such as setting strategy or organizational oversight.	■	<a href="#">Ethics and compliance on page 82</a> <a href="#">Global citizenship governance on page 10</a>
4.2	Indicate whether the Chair of the highest governance body is also an executive officer (and, if so, their function within the organization's management and the reasons for this arrangement).	■	<a href="#">Ethics and compliance on page 82</a>
4.3	For organizations that have a unitary board structure, state the number of members of the highest governance body that are independent and/or non-executive members.	■	<a href="#">Ethics and compliance on page 82</a>
4.4	Mechanisms for shareholders and employees to provide recommendations or direction to the highest governance body.	■	<a href="#">Contact the board</a>
4.5	Linkage between compensation for members of the highest governance body, senior managers, and executives (including departure arrangements), and the organization's performance (including social and environmental performance).	■	<a href="#">Corporate governance guidelines</a>
4.6	Processes in place for the highest governance body to ensure conflicts of interest are avoided.	■	<a href="#">Corporate governance guidelines</a>
4.7	Process for determining the qualifications and expertise of the members of the highest governance body for guiding the organization's strategy on economic, environmental, and social topics.	■	<a href="#">Corporate governance guidelines</a>
4.8	Internally developed statements of mission or values, codes of conduct, and principles relevant to economic, environmental, and social performance and the status of their implementation.	■	<a href="#">Policies on page 17</a> <a href="#">Ethics and compliance on page 82</a>
4.9	Procedures of the highest governance body for overseeing the organization's identification and management of economic, environmental, and social performance, including relevant risks and opportunities, and adherence or compliance with internationally agreed upon standards, codes of conduct, and principles.	■	<a href="#">Global citizenship governance on page 10</a> <a href="#">Ethics and compliance on page 82</a>
4.10	Processes for evaluating the highest governance body's own performance, particularly with respect to economic, environmental, and social performance.	■	<a href="#">Corporate governance guidelines</a>
4.11	Explanation of whether and how the precautionary approach or principle is addressed by the organization.	■	<a href="#">Materials on page 36</a>
4.12	Externally developed economic, environmental, and social charters, principles, or other initiatives to which the organization subscribes or endorses.	■	<a href="#">UN Global Compact on page 176</a> <a href="#">Supply chain responsibility on page 91</a> <a href="#">Collaboration on page 21</a> <a href="#">Management and compliance on page 53</a> <a href="#">Approach on page 118</a> <a href="#">Health and safety on page 132</a>
4.13	Memberships in associations (such as industry associations) and/or national/international advocacy organizations.	■	<a href="#">Affiliations and memberships on page 15</a>

GRI guideline		Coverage	Location within report
4.14	List of stakeholder groups engaged by the organization.	■	<a href="#">Stakeholder engagement on page 12</a>
4.15	Basis for identification and selection of stakeholders with whom to engage.	■	<a href="#">Stakeholder engagement on page 12</a>
4.16	Approaches to stakeholder engagement, including frequency of engagement by type and by stakeholder group.	■	<a href="#">Stakeholder engagement on page 12</a> <a href="#">Collaboration on page 21</a>
4.17	Key topics and concerns that have been raised through stakeholder engagement, and how the organization has responded to those key topics and concerns, including through its reporting.	■	<a href="#">Stakeholder engagement on page 12</a> <a href="#">Collaboration on page 21</a>
<b>Performance: economic</b>			
	Disclosures on management approach.	■	<a href="#">Economic impacts on page 160</a> <a href="#">HP 2011 Annual Report</a>
EC1	Direct economic value generated and distributed, including revenues, operating costs, employee compensation, donations and other community investments, retained earnings, and payments to capital providers and governments. (Core)	■	<a href="#">Data dashboard: society on page 162</a> <a href="#">HP 2011 Annual Report</a>
EC2	Financial implications and other risks and opportunities for the organization's activities due to climate change. (Core)	■	<a href="#">Management and compliance on page 53</a> We report our GHG emissions yearly through the <a href="#">Carbon Disclosure Project (CDP)</a>
EC3	Coverage of the organization's defined benefit plan obligations. (Core)	■	<a href="#">HP 2011 Annual Report</a>
EC4	Significant financial assistance received from government. (Core)	□	
EC5	Range of ratios of standard entry-level wage compared with local minimum wage at significant locations of operation. (Additional)	□	
EC6	Policy, practices, and proportion of spending on locally based suppliers at significant locations of operation. (Core)	■	<a href="#">Supplier diversity on page 115</a>
EC7	Procedures for local hiring and proportion of senior management hired from the local community at significant locations of operation. (Core)	□	
EC8	Development and impact of infrastructure investments and services provided primarily for public benefit through commercial, in-kind, or pro bono engagement. (Core)	■	<a href="#">Social innovation on page 147</a>
EC9	Understanding and describing significant indirect economic impacts, including the extent of impacts. (Additional)	■	<a href="#">Economic impacts on page 160</a>

GRI guideline		Coverage	Location within report
<b>Performance: environmental</b>			
	Disclosures on management approach.	■	<a href="#">Environmental sustainability on page 19</a> <a href="#">Products and solutions on page 29</a> <a href="#">Product reuse and recycling on page 47</a> <a href="#">Management and compliance on page 53</a> <a href="#">Supply chain responsibility on page 91</a>
EN1	Materials used by weight or volume. (Core)	■	<a href="#">Materials on page 36</a> <a href="#">Packaging on page 41</a> <a href="#">Paper on page 27</a>
EN2	Percentage of materials used that are recycled input materials. (Core)	■	<a href="#">Materials on page 36</a>
EN3	Direct energy consumption by primary energy source. (Core)	■	<a href="#">Data dashboard: environment on page 69</a>
EN4	Indirect energy consumption by primary source. (Core)	■	<a href="#">Data dashboard: environment on page 69</a>
EN5	Energy saved due to conservation and efficiency improvements. (Additional)	■	<a href="#">Energy and GHG emissions on page 53</a>
EN6	Initiatives to provide energy-efficient or renewable energy-based products and services, and reductions in energy requirements as a result of these initiatives. (Additional)	■	<a href="#">Use on page 44</a>
EN7	Initiatives to reduce indirect energy consumption and reductions achieved. (Additional)	■	<a href="#">Energy efficiency on page 55</a>
EN8	Total water withdrawal by source. (Core)	■	<a href="#">Water on page 61</a>
EN9	Water sources significantly affected by withdrawal of water. (Additional)	■	<a href="#">Water on page 61</a>
EN10	Percentage and total volume of water recycled and reused. (Additional)	□	
EN11	Location and size of land owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas. (Core)	■	<a href="#">Remediation on page 65</a>
EN12	Description of significant impacts of activities, products, and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas. (Core)	■	<a href="#">Remediation on page 65</a>
EN13	Habitats protected or restored. (Additional)	□	
EN14	Strategies, current actions, and future plans for managing impacts on biodiversity. (Additional)	■	<a href="#">Remediation on page 65</a>
EN15	Number of IUCN Red List species and national conservation list species with habitats in areas affected by operations, by level of extinction risk. (Additional)	□	
EN16	Total direct and indirect greenhouse gas emissions by weight. (Core)	■	<a href="#">Data dashboard: environment on page 69</a>




GRI guideline		Coverage	Location within report
EN17	Other relevant indirect greenhouse gas emissions by weight. (Core)	■	<a href="#">Data dashboard: environment on page 69</a>
EN18	Initiatives to reduce greenhouse gas emissions and reductions achieved. (Additional)	■	<a href="#">Energy efficiency on page 55</a> <a href="#">Renewable energy on page 57</a> <a href="#">Travel on page 58</a> <a href="#">Manufacturing on page 38</a> <a href="#">Transport on page 43</a> <a href="#">Use on page 44</a>
EN19	Emissions of ozone-depleting substances by weight. (Core)	■	<a href="#">Ozone-depleting substances on page 64</a>
EN20	NOx, SOx, and other significant air emissions by type and weight. (Core)	■	HP does not report on this indicator because its emissions in this area are insignificant given our current operations.
EN21	Total water discharge by quality and destination. (Core)	■	<a href="#">Data dashboard: environment on page 69</a>
EN22	Total weight of waste by type and disposal method. (Core)	■	<a href="#">Waste and recycling on page 59</a>
EN23	Total number and volume of significant spills. (Core)	■	<a href="#">Remediation on page 65</a>
EN24	Weight of transported, imported, exported, or treated waste deemed hazardous under the terms of the Basel Convention Annex I, II, III, and VIII, and percentage of transported waste shipped internationally. (Additional)	□	
EN25	Identity, size, protected status, and biodiversity value of water bodies and related habitats significantly affected by the reporting organization's discharges of water and runoff. (Additional)	□	
EN26	Initiatives to mitigate environmental impacts of products and services, and extent of impact mitigation. (Core)	■	<a href="#">Products and solutions on page 29</a> <a href="#">Tech gallery</a>
EN27	Percentage of products sold and their packaging materials that are reclaimed by category. (Core)	■	<a href="#">Product reuse and recycling on page 47</a>
EN28	Monetary value of significant fines and total number of non-monetary sanctions for noncompliance with environmental laws and regulations. (Core)	□	
EN29	Significant environmental impacts of transporting products and other goods and materials used for the organization's operations, and transporting members of the workforce. (Additional)	■	<a href="#">Transport on page 43</a> <a href="#">Travel on page 58</a>
EN30	Total environmental protection expenditures and investments by type. (Additional)	□	

GRI guideline		Coverage	Location within report
<b>Performance: labor practices and decent work</b>			
	Disclosures on management approach.	■	<a href="#">Human rights on page 85</a> <a href="#">Supply chain responsibility on page 91</a> <a href="#">HP people on page 120</a> <a href="#">Diversity and inclusion on page 125</a> <a href="#">Health and safety on page 132</a>
LA1	Total workforce by employment type, employment contract, and region. (Core)	■	<a href="#">HP people on page 120</a>
LA2	Total number and rate of employee turnover by age group, gender, and region. (Core)	□	
LA3	Benefits provided to full-time employees that are not provided to temporary or part-time employees, by major operations. (Additional)	□	
LA4	Percentage of employees covered by collective bargaining agreements. (Core)	□	
LA5	Minimum notice period(s) regarding significant operational changes, including whether it is specified in collective agreements. (Core)	□	
LA6	Percentage of total workforce represented in formal joint management-worker health and safety committees that help monitor and advise on occupational health and safety programs. (Additional)	□	
LA7	Rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities by region. (Core)	■	<a href="#">Health and safety on page 132</a>
LA8	Education, training, counseling, prevention, and risk-control programs in place to assist workforce members, their families, or community members regarding serious diseases. (Core)	■	<a href="#">Health and safety on page 132</a>
LA9	Health and safety topics covered in formal agreements with trade unions. (Additional)	□	
LA10	Average hours of training per year per employee by employee category. (Core)	■	<a href="#">Building careers on page 123</a>
LA11	Programs for skills management and lifelong learning that support the continued employability of employees and assist them in managing career endings. (Additional)	■	<a href="#">Building careers on page 123</a>
LA12	Percentage of employees receiving regular performance and career development reviews. (Additional)	□	
LA13	Composition of governance bodies and breakdown of employees per category according to gender, age group, minority group membership, and other indicators of diversity. (Core)	■	<a href="#">Diversity and inclusion on page 125</a>
LA14	Ratio of basic salary of men to women by employee category. (Core)	□	



GRI guideline		Coverage	Location within report
<b>Performance: human rights</b>			
	Disclosures on management approach.	■	<a href="#">Human rights on page 85</a> <a href="#">Supply chain responsibility on page 91</a>
HR1	Percentage and total number of significant investment agreements that include human rights clauses or that have undergone human rights screening. (Core)	□	
HR2	Percentage of significant suppliers and contractors that have undergone screening on human rights and actions taken. (Core)	■	<a href="#">Our approach on page 96</a> <a href="#">Performance on page 50</a>
HR3	Total hours of employee training on policies and procedures concerning aspects of human rights that are relevant to operations, including the percentage of employees trained. (Additional)	□	
HR4	Total number of incidents of discrimination and actions taken. (Core)	■	<a href="#">Performance on page 50</a>
HR5	Operations identified in which the right to exercise freedom of association and collective bargaining may be at significant risk, and actions taken to support these rights. (Core)	■	<a href="#">Performance on page 50</a> <a href="#">Capability building on page 110</a>
HR6	Operations identified as having significant risk for incidents of child labor, and measures taken to contribute to the elimination of child labor. (Core)	■	<a href="#">Performance on page 50</a> <a href="#">Capability building on page 110</a>
HR7	Operations identified as having significant risk for incidents of forced or compulsory labor, and measures to contribute to the elimination of forced or compulsory labor. (Core)	■	<a href="#">Performance on page 50</a> <a href="#">Capability building on page 110</a>
HR8	Percentage of security personnel trained in the organization's policies or procedures concerning aspects of human rights that are relevant to operations. (Additional)	□	
HR9	Total number of incidents of violations involving rights of indigenous people and actions taken. (Additional)	□	
<b>Performance: society</b>			
	Disclosures on management approach.	■	<a href="#">Management and compliance on page 53</a> <a href="#">Ethics and compliance on page 82</a> <a href="#">Public policy on page 158</a>
S01	Nature, scope, and effectiveness of any programs and practices that assess and manage the impacts of operations on communities, including entering, operating, and exiting. (Core)	■	<a href="#">HP operations on page 52</a>
S02	Percentage and total number of business units analyzed for risks related to corruption. (Core)	□	
S03	Percentage of employees trained in organization's anti-corruption policies and procedures. (Core)	■	<a href="#">Ethics and compliance on page 82</a>
S04	Actions taken in response to incidents of corruption. (Core)	□	

GRI guideline		Coverage	Location within report
S05	Public policy positions and participation in public policy development and lobbying. (Core)	■	<a href="#">Public policy on page 158</a>
S06	Total value of financial and in-kind contributions to political parties, politicians, and related institutions by country. (Additional)	■	<a href="#">Public policy on page 158</a>
S07	Total number of legal actions for anti-competitive behavior, anti-trust, and monopoly practices and their outcomes. (Additional)	□	
S08	Monetary value of significant fines and total number of non-monetary sanctions for noncompliance with laws and regulations. (Core)	□	
<b>Performance: product responsibility</b>			
	Disclosures on management approach.	■	<a href="#">Products and solutions on page 29</a> <a href="#">Product reuse and recycling on page 47</a> <a href="#">Privacy on page 117</a>
PR1	Life cycle stages in which health and safety impacts of products and services are assessed for improvement, and percentage of significant products and services categories subject to such procedures. (Core)	■	<a href="#">Products and solutions on page 29</a> <a href="#">Life cycle assessment on page 31</a> <a href="#">Design on page 34</a> <a href="#">Materials on page 36</a> <a href="#">Manufacturing on page 38</a> <a href="#">Packaging on page 41</a> <a href="#">Transport on page 43</a> <a href="#">Use on page 44</a> <a href="#">Product reuse and recycling on page 47</a>
PR2	Total number of incidents of noncompliance with regulations and voluntary codes concerning health and safety impacts of products and services during their life cycle, by type of outcomes. (Additional)	□	
PR3	Type of product and service information required by procedures, and percentage of significant products and services subject to such information requirements. (Core)	■	HP provides a wide range of information related to many of its products, including materials safety data sheets (MSDS), product environmental information, eco-labels, technical regulations and certificates, and disassembly documents to tell recyclers how to dismantle our products.
PR4	Total number of incidents of noncompliance with regulations and voluntary codes concerning product and service information and labeling, by type of outcomes. (Additional)	□	
PR5	Practices related to customer satisfaction, including results of surveys measuring customer satisfaction. (Additional)	□	

GRI guideline		Coverage	Location within report
PR6	Programs for adherence to laws, standards, and voluntary codes related to marketing communications, including advertising, promotion, and sponsorship. (Core)		HP's Standards of Business Conduct and corporate guidelines set expectations regarding its advertising practices. These resources require that advertisements and marketing collateral are fair, factual, and complete. Advertising claims must be formally substantiated with current factual data before publishing.
PR7	Total number of incidents of noncompliance with regulations and voluntary codes concerning marketing communications, including advertising, promotion, and sponsorship by type of outcomes. (Additional)		
PR8	Total number of substantiated complaints regarding breaches of customer privacy and losses of customer data. (Additional)		
PR9	Monetary value of significant fines for noncompliance with laws and regulations concerning the provision and use of products and services. (Core)	