



keep reinventing

2016 Sustainability Report



We use plastic bottles collected in Haiti to produce new HP ink cartridges—improving lives and the planet. [Learn more.](#)

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Letter from President and CEO Dion Weisler



At HP, we're reinventing for a better world. Sustainability guides every aspect of our business, fuels our innovation and growth, and works to enable everyone, everywhere to thrive. It is the right thing to do for our business, for society, and for the long-term future of our planet.

Our world faces difficult challenges, including climate change, inadequate access to quality education, economic and gender inequalities, and unfair labor practices.

We're encouraged to see governments, corporations, organizations, and individuals supporting the United Nations Sustainable Development Goals (SDGs). In 2016, HP made meaningful progress on 15 of the 17 SDGs, and set bold new targets in key areas where we can have the greatest impact—including two major goals to drastically reduce greenhouse gas emissions in our operations and supply chain.

We are furthering our efforts to protect and empower workers across our supply chain to ensure the people who make our products can thrive at work, at home, and in their communities.

We also are making strides in propelling a circular, low-carbon economy—continuing to transition our company and our customers from linear “take, make, discard” use and manufacturing processes toward a more circular “make, use, return” approach. For instance, through an innovative partnership, hundreds of people in Haiti are collecting recyclables to help support their families, and plastic bottles are finding a new purpose in creating HP ink cartridges. This program not only supports full-circle innovation and helps keep plastic out of the waterways that drain into the Caribbean Sea, but it also provides the people of Haiti with access to new social and economic opportunities.

We're also shifting from transactional product sales to service models, delivering better value to our customers with less waste and cost. With innovations in industrial 3D printing and digital publishing, we're working to transform industries and accelerate a materials-efficient economy.

Inclusive and quality education is essential for people to improve their lives and livelihoods. We help bring quality education and digital literacy to people where they are—including refugees and those living in underserved communities with no access to information technology. More than 9.5 million people have benefited from our efforts to improve the quality of learning since the beginning of 2015—and we are committed to enabling better learning outcomes for millions more.

We're proud of our progress, and we're inspired by the positive impact we're seeing. But there's still work to be done. Every day is a chance to turn change into opportunity, set the bar higher, and keep reinventing for a better world.

You can find more information on HP's goals and sustainability efforts in this report.

A stylized, handwritten signature in dark ink, appearing to read 'Dion Weisler'.

Dion Weisler

President and Chief Executive Officer, HP Inc.



Executive summary

HP Inc.¹ creates technology that makes life better for everyone, everywhere. Through our portfolio of printers, PCs, mobile devices, solutions, and services, we engineer experiences that amaze.

Our strategy

Sustainability is central to HP's vision to create technology that makes life better for everyone, everywhere.

Setting bold, long-term goals for HP focuses our strategy where we can have the greatest impact. We measure success by how our actions and solutions help create a more sustainable future for people, businesses, and communities.

During the last year, we set several social goals to complement the environmental goals that cover each phase of our value chain.

Our new goals

- 1 Develop skills and improve well-being of 500,000 factory workers by 2025, since the beginning of 2015.
- 2 Double factory participation in our supply chain sustainability programs by 2025, compared to 2015.
- 3 Enable better learning outcomes for 100 million people by 2025, since the beginning of 2015.

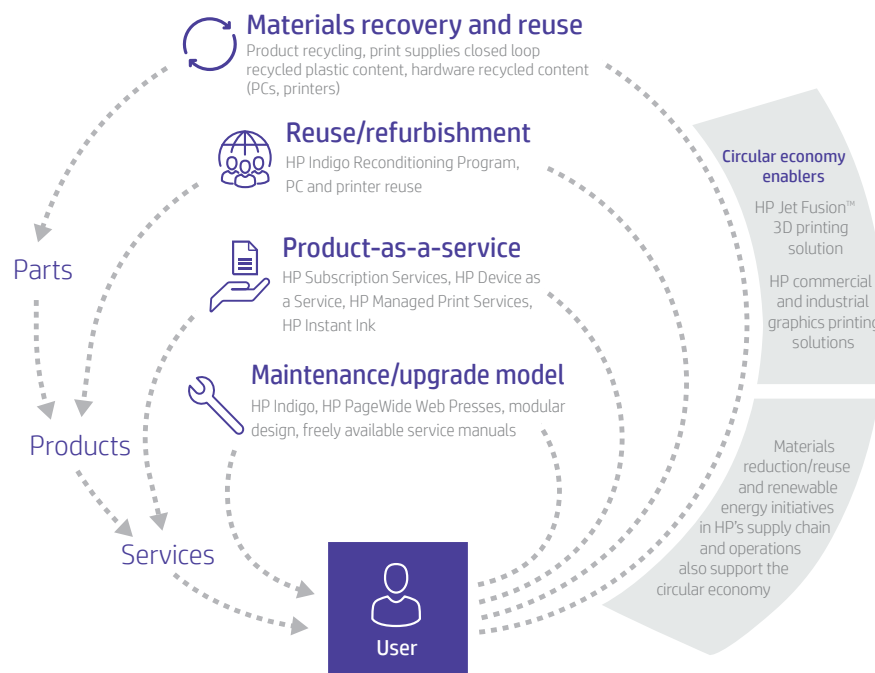
See a [summary](#) of progress against each of our sustainability goals.

This report includes performance data through FY2016 (which ended October 31, 2016), unless stated otherwise.

Environment

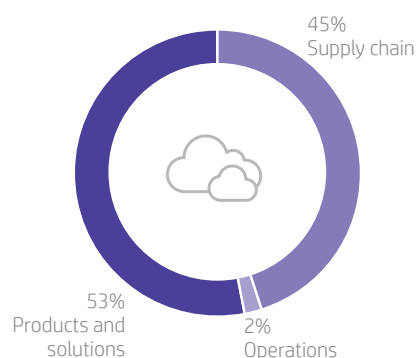
HP circular economy

HP is reinventing how products are designed, manufactured, used, and recovered as we shift our business model and operations toward a circular and low-carbon economy.



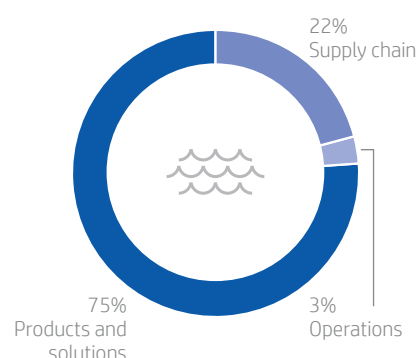
Carbon footprint, 2016*

36,243,700 tonnes CO₂e



Water footprint, 2016**

207,024,000 cubic meters



↓ 1%

decrease in carbon footprint compared to 2015²

↓ 1%

decrease in water footprint compared to 2015²

Our footprints decreased due to a continued shift to smaller and less energy-intensive desktops, notebooks, and tablets. This counteracted increased GHG emissions and water consumption related to printing due to a shift toward more energy- and feature-intensive products, more accurate assumptions about the use of duplexing, and the inclusion of commercial and industrial graphics printing solutions, which use large amounts of paper.

* See relevant notes on [page 69](#).

** See relevant notes on [page 70](#).

In 2016:

Supply chain

↓21%

decrease in supply chain GHG emissions intensity compared to 2010³

↓16%

decrease in product transportation GHG emissions compared to 2010

Operations

↓5%

decrease in Scope 1 and Scope 2 GHG emissions from operations compared to 2015

↓3%

decrease in potable water consumption compared to 2015

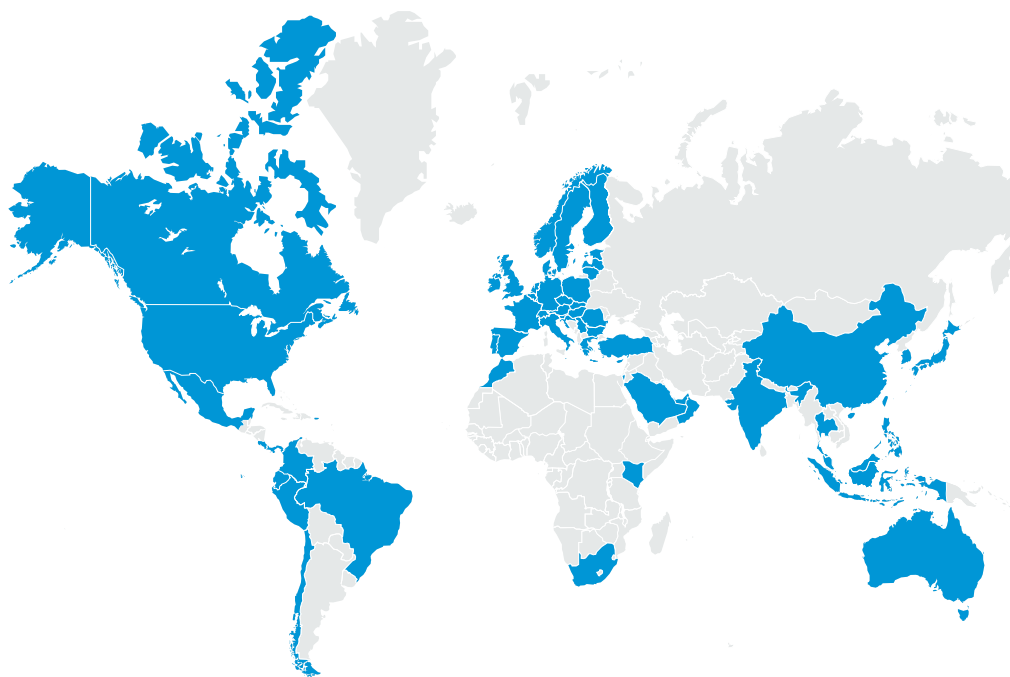
Products and solutions

More
ENERGY STAR

certifications and EPEAT and EPEAT Gold registrations for our personal systems portfolio than any other manufacturer

57%

reduction in materials consumption per printed page on average through HP Instant Ink⁴



We collect used products for resale and recycling in 73 countries and territories worldwide.

Product repair, reuse, and recycling

In 2016:

5.05
million

units of hardware repaired

1.25
million

units of hardware remarketed

119,900

tonnes of hardware and supplies recovered for recycling



Society



Supply chain responsibility

In 2016:

98%

of factories reporting monthly data met student worker guidelines

1st

place ranking in NGO Know the Chain's [inaugural benchmark](#) of ICT companies' efforts to protect workers in their supply chains from forced labor

25%

increase in average supplier performance in social and environmental responsibility (SER) Scorecard

Communities

1,250+

jobs generated based on skills gained in the first three years of the Mashrou3i project in Tunisia⁵

60

schools in 11 countries received state-of-the-art HP Learning Studios

Employees

The most diverse board of directors among U.S. technology companies, including five women and five minority members with three underrepresented minorities⁶

Employees completed 1.1 million training hours, an average of 21 hours each

Integrity

Privacy

Published a new Privacy Statement with simpler, more customer-friendly language

Received EU-U.S. Privacy Shield Certification from the U.S. Department of Commerce

Launched the world's only PC integrated privacy screen,⁷ designed to combat visual hacking

Government relations

Signed amicus brief opposing a U.S. executive order on immigration

Endorsed open letter urging president-elect to honor the U.S. commitment to Paris Climate Agreement

Human rights

Evaluated all nine relevant corporate functions against the appropriate UN UDHR rights



HP Inc.¹ creates technology that makes life better for everyone, everywhere. Through our portfolio of printers, PCs, mobile devices, solutions, and services, we engineer experiences that amaze.

We sell to individual consumers, small- and medium-sized businesses, and large enterprises, including customers in the government, health, and education sectors.

We pursue growth in adjacent markets, such as graphics solutions, copiers, and commercial mobility. We are defining new market categories through 3D printing and immersive computing platforms that fuse together the physical and digital worlds.

We delivered on our full-year financial commitments and executed well on our strategy to protect our core, drive growth, and invest in our future, all while taking cost out of the business. We reported net revenue of \$48.2 billion and \$3.2 billion of net cash provided by operating activities in fiscal year 2016. See extensive information about our financial performance at our [Investor Relations](#) site.

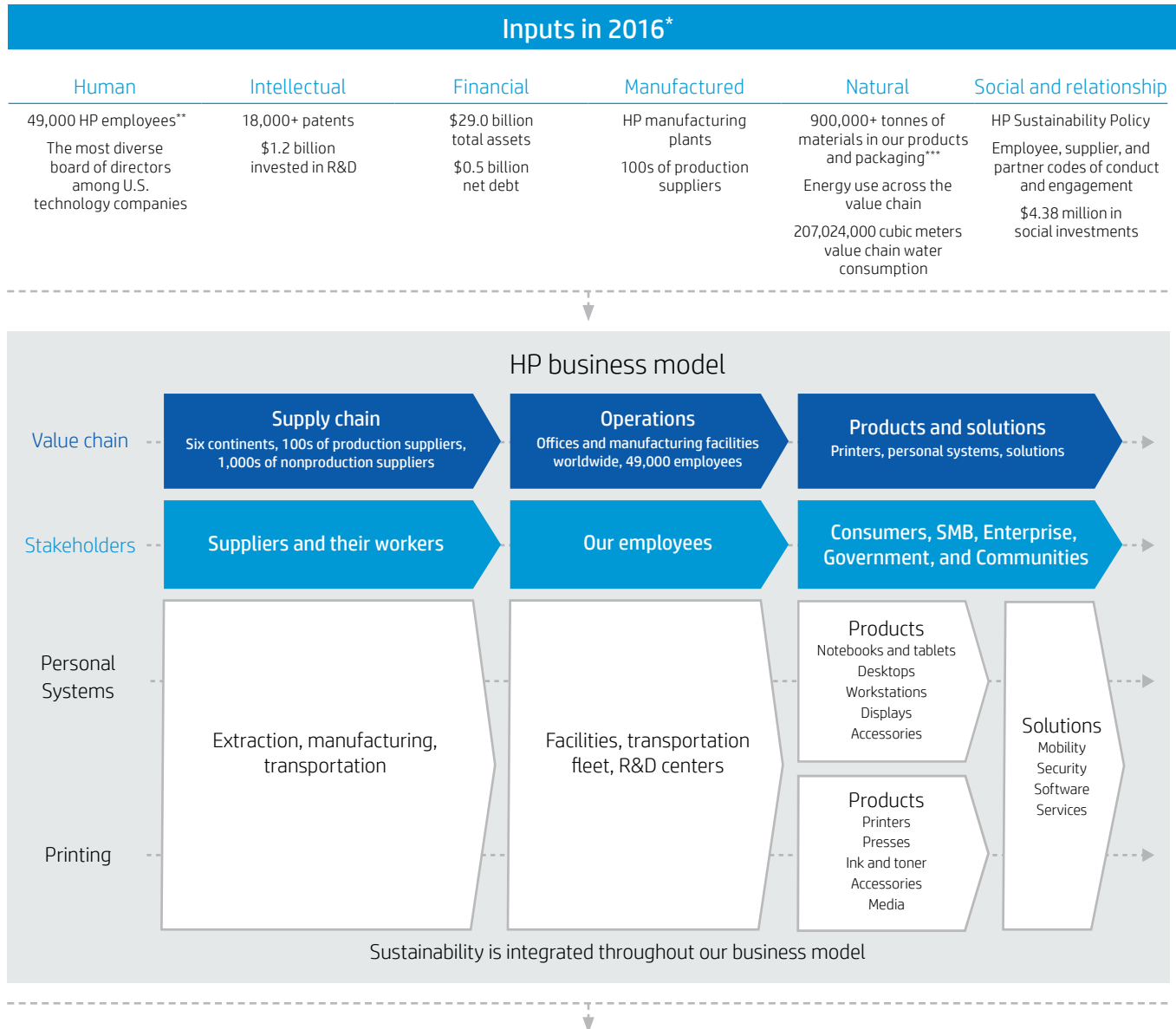
Corporate summary

- Fortune 100 company
- Dion Weisler, President and Chief Executive Officer, HP Inc.
- Margaret C. Whitman, Chairman of the Board, HP Inc.
- Incorporated in the State of Delaware, United States
- Ticker symbol HPQ on the New York Stock Exchange
- Corporate headquarters: Palo Alto, California

See a list of recent [awards and recognition](#).

How we deliver value

Sustainability is fundamental to our corporate strategy and informs our decisions throughout the value chain. It advances our current and future lines of business and helps us meet our customers' needs. Our approach to creating value is multifaceted, as illustrated by the graphic.



* These proof points are representative examples and not a full list.

** As of October 31, 2016.

*** This number does not include packaging for commercial and industrial graphics printing solutions, or documentation for any products.

****As of April 2017.



Sustainability strategy

“At HP, sustainability serves
 as a guiding principle for
 how we conduct business and
 create solutions that
 are changing the world.”

Dion Weisler, President and Chief
 Executive Officer, HP Inc.



View the [Sustainability at HP](#) video.

Perfect 10

scored for corporate social
 responsibility in The Gartner
 Supply Chain Top 25 for 2017

Making life better for everyone, everywhere


















With operations in 170 countries, our community is the world. We recognize and embrace the opportunity and responsibility to address some of the greatest shared challenges facing society today, including resource scarcity, the shift to cleaner energy, access to quality education and economic opportunity, human rights protection throughout the supply chain, and data security and privacy.

Sustainability is a powerful force for innovation. It drives progress toward our business priorities, from designing and delivering our core products and services, to developing new business models and solutions that generate growth. It also helps us unlock value and shape the future through breakthrough technologies such as 3D printing. Our holistic approach to sustainability covers a broad range of issues across three pillars:

- Environment:** HP is reinventing how products are designed, manufactured, used, and recovered as we shift our business model and operations toward a circular and low-carbon economy. Working with our supply chain partners and others, we are reducing the environmental impact of our products and services at every stage of the value chain. We invest heavily in research and development to help customers stay ahead of what's next, and enable them to seize new opportunities while advancing their own sustainability priorities. Through industry-leading repair, reuse, and recycling programs, and our product-as-a-service business models, we aim to keep products and materials in circulation for as long as possible, while driving further closed loop innovations.
- Society:** We're using our technology, innovation, and scale to create a more just and inclusive society. Throughout our supply chain, we empower workers and ensure protections for the people who make our products. We are deeply committed to our employees, who are central to our company's success, and dedicated to fostering a diverse, welcoming, and collaborative company and industry. Working with business and nonprofit partners, we deploy our technology, capital, and resources to advance quality learning and digital inclusion, meeting people where they are and taking them where they want to go.
- Integrity:** HP is committed to always acting with integrity, fairness, and accountability, which are fundamental to an inclusive society and a thriving business. We are uncompromising in our expectations of ethical behavior by our employees, partners, and suppliers. We have structures, programs, and processes to safeguard human rights across our value chain. Through robust policies, protocols, and controls, we secure the privacy of our customers and employees. This commitment to responsible corporate citizenship ensures that HP is a trusted partner to our customers and all of our stakeholders.

United Nations Sustainable Development Goals

HP supports the [United Nations Sustainable Development Goals \(SDGs\)](#). We have existing programs that contribute to progress against 15 of the 17 goals, and will continue to drive innovations that help achieve them. This table references sections of this report that relate to each goal.

 <p>Goal 1 End poverty in all its forms everywhere HP's actions Communities</p>	 <p>Goal 2 End hunger, achieve food security and improved nutrition and promote sustainable agriculture HP's actions No major programs at this time</p>	 <p>Goal 3 Ensure healthy lives and promote well-being for all at all ages HP's actions Wellness, Health and safety</p>
 <p>Goal 4 Ensure inclusive and quality education for all and promote lifelong learning HP's actions Communities</p>	 <p>Goal 5 Achieve gender equality and empower all women and girls HP's actions Supply chain responsibility, Diversity and inclusion</p>	 <p>Goal 6 Ensure access to water and sanitation for all HP's actions Supply chain environmental impact: Water, Operations: Water</p>
 <p>Goal 7 Ensure access to affordable, reliable, sustainable and modern energy for all HP's actions Renewable energy, Products and solutions: Energy efficiency</p>	 <p>Goal 8 Promote inclusive and sustainable economic growth, employment and decent work for all HP's actions Supply chain responsibility, Communities</p>	 <p>Goal 9 Build resilient infrastructure, promote sustainable industrialization and foster innovation HP's actions Circular economy, Communities</p>
 <p>Goal 10 Reduce inequality within and among countries HP's actions Supplier diversity, Communities</p>	 <p>Goal 11 Make cities inclusive, safe, resilient and sustainable HP's actions Communities</p>	 <p>Goal 12 Ensure sustainable consumption and production patterns HP's actions Circular economy</p>
 <p>Goal 13 Take urgent action to combat climate change and its impacts HP's actions Our footprint, Supply chain environmental impact: GHG emissions, Operations: GHG emissions, Products and solutions</p>	 <p>Goal 14 Conserve and sustainably use the oceans, seas and marine resource HP's actions No major programs at this time</p>	 <p>Goal 15 Sustainably manage forests, combat desertification, halt and reverse land degradation, halt biodiversity loss HP's actions Paper</p>
 <p>Goal 16 Promote just, peaceful and inclusive societies HP's actions Supply chain responsibility, Responsible minerals, Diversity and inclusion, Corporate ethics, Human rights</p>	 <p>Goal 17 Revitalize the global partnership for sustainable development HP's actions HP proudly supports the UN Sustainable Development Goals, the UN Global Compact, the Global Reporting Initiative, and other global efforts to advance sustainable development</p>	

HP sustainability goals

Driving progress across our value chain

Setting bold, long-term goals for HP focuses our strategy where we can have the greatest impact. We measure success by how our actions and solutions help create a more sustainable future for people, businesses, and communities. Our efforts also drive progress toward the [United Nations SDGs](#).

Progress indicators

- ✓ Achieved
- On target
- ✗ Needs attention

Goal	Progress in 2016	UN SDGs
Environment		
Climate change		
Scope 1 and 2 GHG emissions ↓ 25%	Reduce Scope 1 and Scope 2 GHG emissions from global operations by 25% by 2025, compared to 2015. ↓ 5%	HP's global operations produced 383,700 tonnes of Scope 1 and Scope 2 CO ₂ e emissions, 5% less than our 2015 baseline. Learn more. ○ 13
Renewable electricity 100%	Use 100% renewable electricity in our global operations, with a goal of 40% by 2020. 14%	Renewable electricity purchased and generated on-site accounted for 14% of our total consumption. Learn more. ○ 7, 13
Supply chain GHG intensity ↓ 10%	Reduce first-tier production supplier and product transportation-related GHG emissions intensity 10% by 2025, compared to 2015. ¹ N/A	The base year 2015 is the first year data is available. Learn more. N/A 13
Supplier CO ₂ e emissions ↓ 2 million tonnes	Help suppliers cut 2 million tonnes of carbon dioxide equivalent (CO ₂ e) emissions between 2010 and 2025. ² ↓ 940,000 tonnes CO ₂ e	Through December 2016, suppliers achieved 47% of this target through new and ongoing energy efficiency projects, energy management programs, and renewable energy use. Learn more. ○ 13
Product GHG emissions intensity ↓ 25%	Reduce the GHG emissions intensity of HP's product portfolio by 25% by 2020, compared to 2010. ³ ↓ 19%	Achieved a 19% decrease, partly due to an ongoing shift in our personal systems product mix to smaller, more energy-efficient devices. Learn more. ○ 7, 13
Natural resources		
Zero Deforestation	Achieve zero deforestation associated with HP brand paper and paper-based product packaging ⁴ by 2020. 100% HP brand paper	Achieved for HP brand paper, and surveyed our paper-based packaging suppliers to establish a baseline for the percentage of certified and recycled fiber. Learn more. ○ 13, 15
Potable water consumption ↓ 15%	Reduce potable water consumption in global operations by 15% by 2025, compared to 2015. ↓ 3%	Potable water consumption equaled 2,477,000 cubic meters globally, 3% less than in 2015. Learn more. ○ 6
Product recycling 1.2 million tonnes	Recycle 1.2 million tonnes of hardware and supplies by 2025, since the beginning of 2016. 119,900 tonnes	Recycled 102,800 tonnes of hardware and 17,100 tonnes of ink and toner cartridges. Learn more. ○ 12
Society		
Empowering 500,000 workers	Develop skills and improve well-being of 500,000 factory workers by 2025, since the beginning of 2015. 45,700 factory workers	45,700 supplier factory workers participated in 14 worker skills development and well-being projects, bringing the total to 123,700 workers trained since the beginning of 2015. Learn more. ○ 8, 5
Doubling factory participation 2x	Double factory participation in our supply chain sustainability programs by 2025, compared to 2015. N/A	The methodology for measuring progress against this goal and baseline data will be published in HP's 2017 Sustainability Report. Learn more. ○ 8, 12, 13
Better learning outcomes for 100 million	Enable better learning outcomes for 100 million people by 2025, since the beginning of 2015. 4.9 million people	More than 9.5 million students and adult learners have benefited from HP solutions that advance quality learning and digital literacy and enable better learning outcomes since the beginning of 2015. Learn more. ○ 4
Integrity		
Business conduct training ↑ 99%+	Maintain greater than 99% completion rate of annual Standards of Business Conduct training among active HP employees and the Board of Directors. 99.74%	Achieved a 99.74% participation rate, despite reducing the training window from 18 to five weeks. Learn more. ✓

Stakeholder engagement

We seek insight from everyone our business affects

#1 ranking

received in inaugural Know the Chain benchmark of information and communications technology companies' efforts to protect workers in their supply chains from forced labor

MEMBER OF
Dow Jones Sustainability Indices
 In Collaboration with RobecoSAM

5 years

in a row, named to the Dow Jones Sustainability World Index and North American Index



“A” lists

achieved for CDP Climate Change (3rd consecutive year), Forests, and Supply Chain

The success of our sustainability strategy relies on collaboration with and input from key stakeholders, including employees, suppliers, customers, peer companies, public policy makers, industry bodies, nongovernmental organizations (NGOs), sector experts, and others. Through regular, ongoing, close contact with our stakeholders, we are better able to anticipate emerging trends and challenges and innovate solutions.

We identify appropriate stakeholders to engage by assessing factors such as their expertise, willingness to collaborate, reputation, location, and sphere of influence. We gather valuable insights for improving our business and sustainability strategy through a range of engagement activities. These include partnerships, sponsorships, collaboration on industry initiatives, customer and supplier education, supplier capability-building programs, supplier audits and assessments, conference participation, employee surveys, mentoring, white papers, and more.

Examples of recent engagement activities related to material issues include the following:

- **Circular economy:** Through the [Ellen McArthur Foundation Circular Economy 100](#), a global platform, top companies and innovators drive progress toward a more materials- and energy-efficient future. During the year, we worked with a telecom company on a case study related to modularity, co-led a [repairability project](#) with iFixit, and started a new project on 3D-printed spare parts. Read more in [Circular economy](#).
- **Climate change** (relates to multiple material issues): To expand our impact beyond our business and industry, we join leading companies in the [World Wildlife Fund \(WWF\) Climate Savers program](#) and [RE100](#) to set and pursue ambitious climate action goals. Read more in [Our footprint](#). We work with WWF's Global Forest & Trade Network (GFTN) and our suppliers to determine the source of virgin fiber and to increase the amount of certified fiber where possible, and we report progress annually to the WWF GFTN and CDP forests program. Read more in [Paper](#).
- **Energy and GHG emissions in supply chain:** In 2016, we launched a program to establish best practices and national guidelines for facility energy management across China's IT sector. The three-year pilot—with NRDC, the China National Institute of Standardization, local agencies, and suppliers in Suzhou, China—will enhance suppliers' energy-related operations, technology, and continuous improvement processes. Read more in [Supply chain environmental impact](#).
- **Waste and hazardous materials in supply chain:** As a member of Green America's [Clean Electronics Production Network](#), HP supports our industry's movement toward zero exposure to hazardous substances during product manufacturing. The multi-stakeholder initiative focuses on safer alternatives to priority substances, and a common standard for reporting substance use, among other activities. Read more in [Materials](#).
- **Labor practices in supply chain:** In 2016, HP joined our customer Diageo, a UK beverage company, to empower more than 4,000 women through leadership training in four of our supplier factories in China and Malaysia. This program is part of Diageo's broader worker empowerment initiative, Plan W, and contributes to HP's ongoing work to support women in and out of the factory. Read more in [Supply chain responsibility](#).
- **Diversity and inclusion:** The company has collaborated with organizations such as Anita Borg Institute, Association of Latino Professionals for America, Catalyst,



100%

achieved on Corporate Equality Index every year since 2003



82nd

ranking achieved out of more than 4,000 listed companies in Corporate Knights 2017 Global 100 Most Sustainable Corporations



EPA Smartway

Excellence Award received for 3rd consecutive year (and 5th time overall)



Top 1%

score for all suppliers assessed by EcoVadis and 8th consecutive Gold CSR rating

Diversity Best Practices, Information Technology Senior Management Forum, National Action Council for Minorities in Engineering, Out & Equal Workplace Advocates, Professional Business Women of California, Simmons Leadership Conference, and Tapia Conference: Diversity in Computing.

- **Social application of IT:** To support employability for young refugees in the Middle East, HP will provide the technology and tools to learn business and IT skills. Our partners include Digital Promise, the Global Business Coalition for Education, Intel, and Microsoft. Read more in [Communities](#).

Numerous additional examples of stakeholder engagement are included throughout the report. External ratings and rankings also provide HP with external validation and valuable feedback about our progress in sustainability, which we take into consideration as we develop our strategy.

Materiality

We invest our time and resources where they matter most

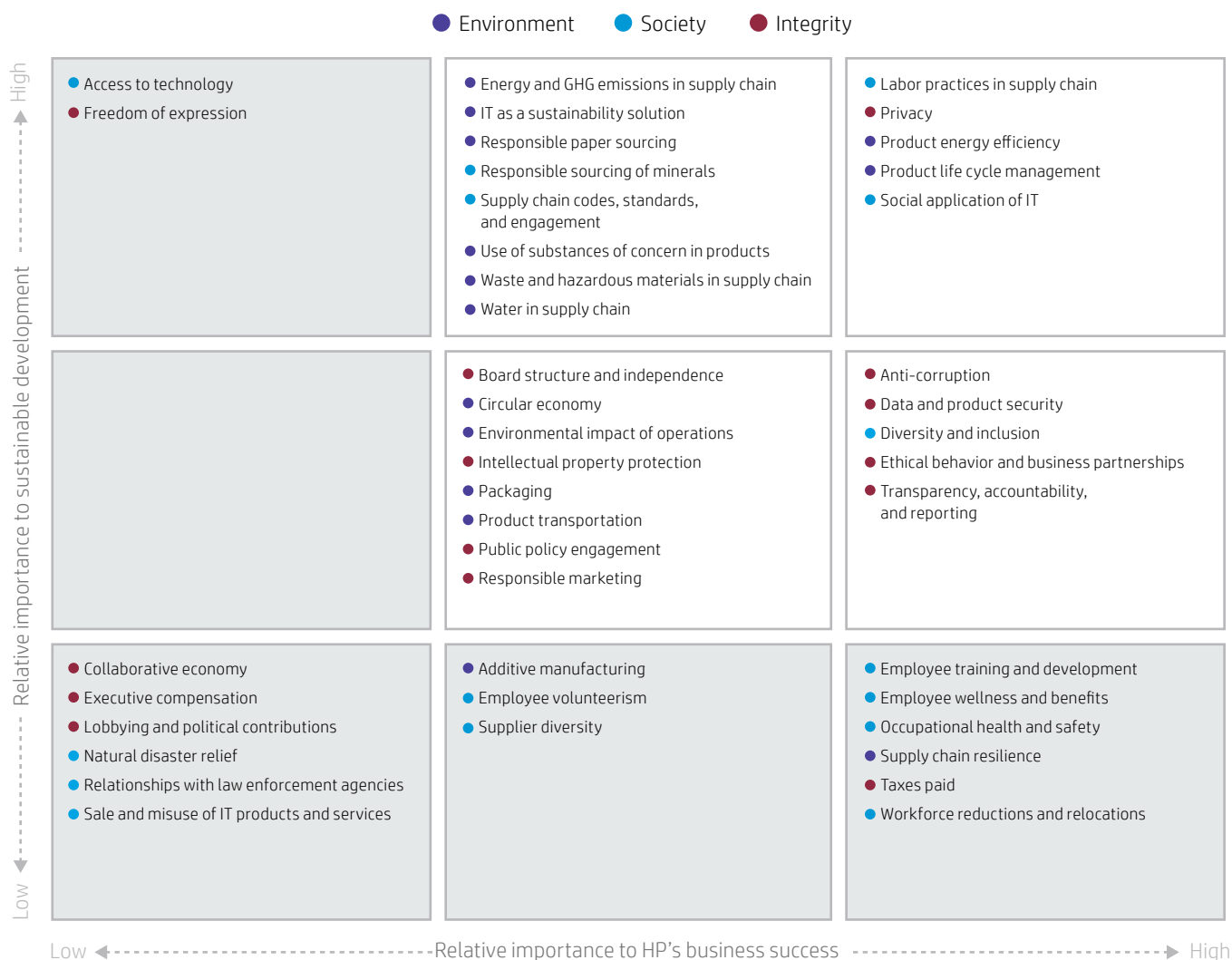
We periodically conduct materiality assessments to review the sustainability issues we face, reconfirm our long-standing areas of focus, and clarify and shape our sustainability strategy and investments. This enables us to focus on the areas where we can have the greatest positive impact, determine any gaps, and identify emerging issues and new leadership opportunities for our business. We have set [aggressive goals](#) related to several of our most material issues, to manage performance and drive long-term progress.

Building on a model previously established, we produced a materiality assessment for HP in 2015. Working with the consultancy BSR (formerly Business for Social Responsibility), we reviewed internal documents, interviewed key internal and external stakeholders, and considered developments in our industry and emerging trends in sustainability. We also took into account leading reporting frameworks, including the Global Reporting Initiative (GRI) G4 Sustainability Reporting Guidelines, and the Sustainability Accounting Standards Board (SASB) Standards.

The resulting matrix maps issues by relative importance to sustainable development and to HP's business success. It categorizes each issue based on the three pillars of our strategy: environment, society, and integrity. Issues in the four upper-right-hand sections fall above the materiality threshold for the purpose of this report. Topics below the materiality threshold are not covered in as much detail, but remain important to HP's sustainability and business strategies.

Information about the issues covered by our materiality matrix, including their definitions, corresponding GRI G4 Aspects, and the boundary of each Aspect, can be found in the [GRI index](#) and throughout this report.

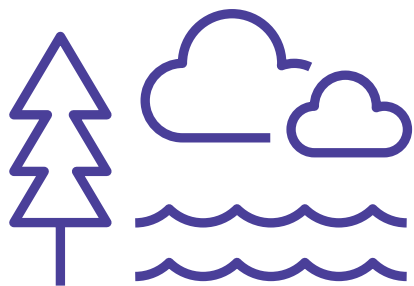
HP 2015 materiality assessment



Sustainability governance

Our commitment begins with our leaders

At all levels of the company, starting with our Board of Directors, we embed sustainability throughout our strategy, policies, programs, and value chain. The HP Board of Directors' Nominating, Governance and Social Responsibility (NGSR) Committee oversees global citizenship policies and programs as well as other legal, regulatory, and compliance matters regarding current and emerging political, environmental, global, and public policy trends. The Committee receives regular updates on key sustainability metrics and results. ([Listen to](#) NGSR Committee members talk about sustainability at HP.) Our Executive Leadership Team, led by our CEO, retains overall responsibility for sustainability as part of our business strategy. A team of executives, led by our Global Head of Sustainability and Product Compliance, sets HP's sustainability strategy and drives progress companywide. These leaders also connect with the NGSR Committee and other relevant executive committees.



Environment

HP is reinventing how products are designed, manufactured, used, and recovered as we shift our business model and operations toward a circular and low-carbon economy.



Circular economy

Leading and scaling a global transformation

By 2030, there will be three billion new technology users globally. Simultaneously, the world faces pressing challenges related to resource availability, climate change,¹ and inequality. We believe that delivering the economic and social benefits of technology to billions more people must be done sustainably. This requires a profound shift from a traditional, linear production model of “take, make, dispose,” to a circular and low-carbon economy.

This model is regenerative by design and continually recovers and reuses materials. It decouples business growth from a reliance on increasingly scarce raw materials, benefiting the environment while advancing business success. Innovative new business models such as product-as-a-service offerings increase the value derived from resources while strengthening customer engagement and relationships. The shift from analog to digital printing and additive manufacturing ([3D printing](#)) holds the promise to transform supply chains.

Our priorities

Decouple business growth from consumption

- Keep [materials](#) in use at their highest state of value for as long as possible
- Develop [energy-efficient](#) products that are designed for recyclability
- Decrease the amount of materials required to make and use products
- Create new technologies and products that enable customers to reduce their material usage
- Repurpose products at end of service through [repair, reuse, and recycling](#)

Disrupt industry business models

- Reinvent how solutions are designed and delivered
- Provide [product-based services](#) that help customers easily scale technology solutions while reducing costs and waste
- Extend product life through design for repairability
- Increase repair, reuse, and recycling

Digitize supply chains and production

- Transform how entire industries design, make, and distribute products
- Advance [commercial print solutions](#) to support the analog-to-digital shift
- Progress [3D printing](#) technologies that streamline prototyping and improve the economics of short-run manufacturing

2016 highlights

105 million kWh

of renewable electricity purchased and generated on-site globally, 14% of our total consumption

25%+

reduction in paper waste and up to 30% decrease in imaging and printing costs through [HP Managed Print Services](#)

10x faster

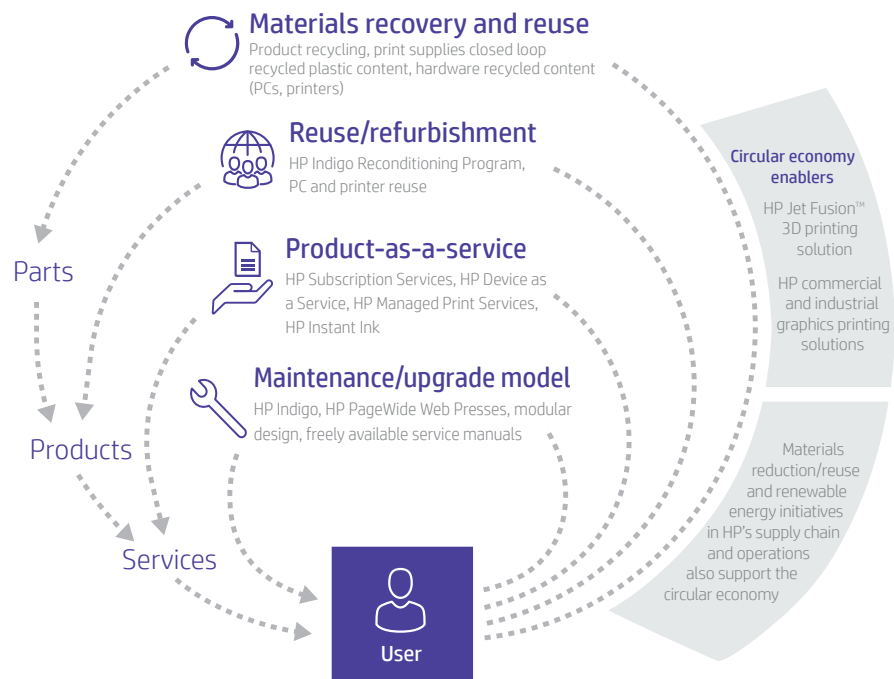
HP Multi Jet Fusion technology enables the printing of high-quality parts up to 10 times faster² and at a lower cost³ than other 3D print systems currently on the market



View [Full Circle with HP](#), a video about our progress in this area.

HP has a long history of driving more sustainable practices across our value chain and beyond. Leading our industry and customers toward a circular and low-carbon economy at scale is the next step in that journey. Our efforts cut across customer segments, from home users to the largest enterprises. Through innovative design, we are transforming every part of our product and services portfolio, to keep products and materials in use for longer, reducing environmental impact while providing customers increased value. The graphic below illustrates four “loops” that contribute to “circularity,” with the inner loops being the most resource effective. Numerous examples of HP offerings in each area are included.

Our circular economy strategy



By [sourcing recycled plastic collected at the Truitier, Haiti, landfill](#) that can be upcycled for use in our [closed loop ink cartridge recycling program](#), we illustrate how an innovative approach to material reclamation also creates new economic opportunities and drives a more inclusive circular economy.

Our suppliers play an essential role in our circular economy strategy. We work closely with them to use materials, energy, and water more efficiently and to remove substances of concern from our products and manufacturing processes. For example, at our major supplier in Brazil, end-of-service HP products are recycled and raw materials are reused in manufacturing. See [Supply chain environmental impact](#) for more detail. We also collaborate with product recovery and materials vendors to close the loop on material flows at end of service. See [Product repair, reuse, and recycling](#) for additional information, including our new recycling goal and a link to a detailed list of our global recycling vendor sites, a first in the industry.

Customers are also critical to achieving circular systems and maintaining the value of products and materials. We offer products with modular features such workstations, high-end printers, and [digital presses](#), which allow customers to upgrade as their needs evolve, rather than buy new models. We provide free service manuals for most products, supplemented with service options, warranties, and repair services. We also provide access to replacement accessories and parts and enable customers everywhere to repair HP products directly, for example using [iFixit](#), rather than only sending them to centralized repair facilities. [Learn more](#).

25+ years

HP Planet Partners has provided personal and business customers with convenient ways to recycle our products

70%

HP Elite Slice business PC is up to 70% lighter than the EliteDesk 800 G2 Small Form Factor PC

10/10

The HP Elite x2 1012 G1 received a perfect iFixit score for repairability, the first ever for a tablet

3.4+

billion HP ink and toner cartridges manufactured through 2016 in our closed loop program, using more than 88,900 tonnes of recycled content plastic

By shifting to product-as-a-service offerings such as [Managed Print Services](#) and [Device as a Service](#), customers get the latest technology while helping to keep products, components, and materials operating at a high level for as long as possible. Through our [Instant Ink](#) service, customers return cartridges at a significantly higher rate than those that purchase ink in conventional ways, helping to reduce materials consumption by 57% on average per printed page.

We demonstrate circular principles in our own [operations](#) as well. HP continues working to reduce waste and increase recycling of materials and water, and we're making progress toward our [goal](#) of 100% renewable electricity in our operations, and 40% by 2020.

Beyond our own value chain and industry, progress in this area demands business leadership, collaboration, and effective public policy. In 2016, HP advanced the circular economy more broadly by:

- Publishing [5 ways to take part in the circular economy](#), a guide that recommends critical questions organizations can ask themselves to advance circular economy principles in-house.
- Delivering executive thought leadership. “[Bringing sustainability full circle](#),” published in our *Innovation* journal, describes how our circular economy approach tackles environmental challenges.
- Leading and participating actively in several collaborative projects with the [Ellen MacArthur Foundation Circular Economy 100](#), a global platform of top companies and innovators working to accelerate progress in this area. During the year, we worked with a telecom company on a case study related to modularity, co-led a [repairability project](#) with iFixit, and started a new project on 3D-printed spare parts.
- Contributing to public policy discussions, in areas such as the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal and the legitimate movement of used equipment. Learn more in [Government relations](#).



Measuring our impacts across the value chain

↓1%

decrease in carbon footprint
compared to 2015¹

↓1%

decrease in water footprint
compared to 2015¹

The manufacturing, delivery, and use of HP products and solutions requires a substantial amount of natural resources. To understand our impacts, we were the first in the IT industry to publish a full carbon footprint and one of the first to disclose a complete water footprint. These cover our entire value chain—from hundreds of production suppliers and thousands of nonproduction suppliers to our operations, product transportation providers, and millions of customers worldwide. The insights we gain through this process enable us to prioritize efforts to continually improve our performance and track our progress.

HP has set ambitious climate goals across our value chain to drive progress (see below). As a part of renewing participation in the [Climate Savers program](#), HP worked with WWF specialists to develop a science-based target for Scope 1 and Scope 2 GHG emissions and a supply chain GHG emissions intensity reduction goal for Scope 3 emissions. WWF has publicly supported those goals, confirming the rigor of our goals-setting process. Together, our Scope 1, 2, and 3 goals align with guidance from the Science Based Target Initiative, from which we are pursuing target validation.

Our goals

Supply chain GHG emissions intensity

↓10%

reduction in first-tier production supplier and product transportation-related GHG emissions intensity by 2025, compared to 2015²

Scope 1 and 2 GHG emissions

↓25%

reduction in Scope 1 and Scope 2 GHG emissions from global operations by 2025, compared to 2015

Product GHG emissions

↓25%

reduction in the GHG emissions intensity³ of HP's product portfolio by 2020, compared to 2010

Supplier CO₂e emissions

2 million tonnes

CO₂e emissions from suppliers prevented between 2010 and 2025⁴

Renewable energy

100%

renewable electricity usage in global operations, with a goal of 40% by 2020

Potable water consumption

↓15%

reduction in potable water consumption in global operations by 2025, compared to 2015



We also [incentivize suppliers](#) to set and take steps to meet their own goals, helping us reduce the carbon footprint of our supply chain. To extend our influence beyond HP and the information technology industry, we join leading companies in goal-setting efforts through the [WWF Climate Savers program](#) and [RE100](#).

HP is one of 22 leading companies participating in WWF's Climate Savers, a global program to engage business and industry on climate and energy.

Carbon

Supply chain and customer use-phase emissions drive our footprint

We strive to reduce the climate impact of our supply chain, operations, and products and solutions. HP's carbon footprint in 2016 equaled 36,243,700 tonnes of CO₂e, 1% less than in 2015. During the year, we worked to set and make progress toward our GHG emissions reduction goals across the value chain. See a [full list](#) of our goals and progress.

Products and solutions were the main contributor to our footprint, equaling 53% of the total. Absolute greenhouse gas (GHG) emissions from personal systems product use fell by 10% compared to 2015, reflecting a continued shift to smaller and less energy-intensive desktops, notebooks, and tablets. In 2016, we added commercial and industrial graphics printing solutions, which use large amounts of paper, to our product use footprint calculations. As a result, reported GHG emissions related to printing rose by 11% compared to 2015. Not including those products, printing-related GHG emissions increased by 1% over that period, due to a shift toward more energy- and feature-intensive products and more accurate assumptions about the use of duplexing (a smaller percentage than previously assumed). Overall GHG emissions from product use across our portfolio increased by 1% year over year. Without the addition of commercial and industrial graphics printing solutions, there would have been a 4% decrease overall. We continue to pursue innovations that advance product energy efficiency and optimize paper use during printing. See [Products and solutions](#) for details.

Supply chain GHG emissions were the second-largest contribution to our footprint, representing 45% of the total. The volume and type of products we manufacture drive emissions in this category. Absolute GHG emissions from our supply chain fell by 4% compared to 2015. During 2016, a continued shift toward less-materials-intensive personal systems, as well as lower printer sales, contributed to our overall emissions reduction. HP is dedicated to understanding and reducing supplier GHG emissions through stringent management and transparency requirements, goal-setting, supplier collaboration, and incentives for ongoing performance improvement. See [Supply chain environmental impact](#) for details.

Our operations are the third and smallest contributor to our carbon footprint, representing 2% of the total. Operational emissions result mainly from the amount and GHG-emissions intensity of energy used in our facilities. See [Operations](#) for details.

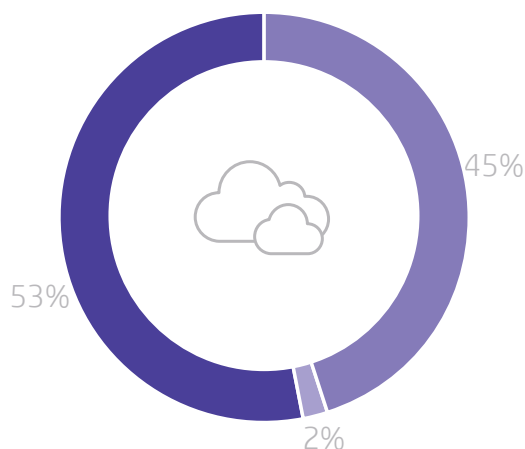
View full [carbon footprint data](#) for 2015–2016 and details about our methodology in the [HP carbon accounting manual](#).



HP was named to CDP's "Climate A List" for the third year running in recognition of the company's leadership in corporate action on climate change.

Carbon footprint, 2016*

36,243,700 tonnes CO₂e



Supply chain 45%

Greenhouse gas emissions in our supply chain result mainly from the raw materials used in, and manufacturing of, our products.

Materials extraction through manufacturing
 14,700,000
Capital goods 200,000
Upstream energy production 100,000
Transport 1,300,000

Operations 2%

Greenhouse gas emissions from our operations result mainly from the energy used by our facilities around the world.

Facilities 352,700
Transportation fleet 31,000
Business travel 60,000
Employee commuting 200,000

Products and solutions 53%

Emissions from the energy our products and solutions consume after sale, while used by customers.

Product use 19,300,000
Product end of service De minimis
Buildings leased to others De minimis
Investments De minimis

* See relevant notes on [page 69](#).

Water

Improving our understanding of consumption across the value chain

Because many parts of the world grapple with the availability and quality of water resources, HP is committed to calculating, disclosing, and reducing water use across our global value chain.

In 2016, our water footprint equaled 207,024,000 cubic meters, 1% less than 2015. Electricity consumption across the value chain was the most significant contributor, representing 67% of the total, since electricity generation is a major water user. Half of our overall footprint was due to electricity-related water consumption resulting from product use. That amount decreased 3% year over year, largely due to a continued shift to smaller and less energy-intensive desktops, notebooks, and tablets. The close connection between GHG emissions from energy use and water consumption underscores the importance of our efforts to continually improve product energy efficiency.

The manufacturing of paper used by customers in our products accounted for 26% of HP's water footprint in 2016. This amount increased by 13% compared to 2015 due largely to the inclusion in our calculations this year of commercial and industrial graphics printing

solutions, which use substantial amounts of paper. Not including those products, paper-related water consumption would have decreased by 2%. We encourage customers to use paper efficiently in a variety of ways, including using duplex printing or lower-impact paper, and recycling paper after use. For more information, see the [Paper](#) section.

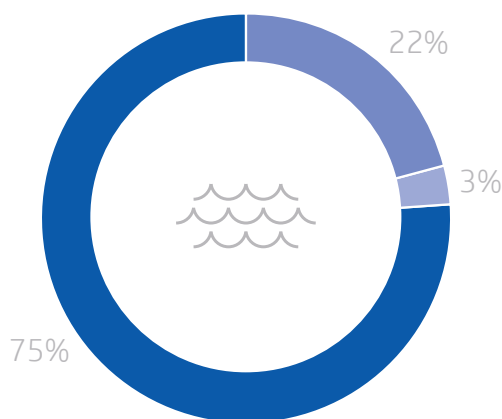
Through 2016, potable water consumption⁵ at HP sites globally decreased by 3% compared to 2015. To drive progress moving forward, we have established a new [goal](#) to reduce potable water consumption in global operations by 15% by 2025, compared to 2015.

View full [water footprint data](#) for 2016 and an explanation of the methodology in the [HP water accounting manual](#).

Learn more about how we reduce water use across our business in [Supply chain environmental impact](#), [Operations](#), and [Products and solutions](#).

Water footprint, 2016*

207,024,000 cubic meters



Supply chain 22%

Our suppliers affect our water footprint primarily through their use of electricity. We encourage suppliers to use and discharge water responsibly, and provide tools that improve water management practices.

Direct consumption 12,600,000
 Indirect consumption 31,800,000

Operations 3%

While our operations are not water intensive, water availability is a growing concern. We are committed to using less water, especially at operations in water-stressed regions.

Direct consumption 3,224,000
 Indirect consumption 3,200,000

Products and solutions 75%

Customers using our products account for most of our water footprint. This water is indirectly consumed through using electricity to power our devices and through paper manufacturing.

Indirect consumption – electricity for product use 103,300,000
 Indirect consumption – paper use 52,900,000

* See relevant notes on [page 70](#).



Supply chain environmental impact

Driving sustainability across our global network

HP's hundreds of production suppliers and thousands of nonproduction¹ suppliers are essential partners in our efforts to embed sustainability across every aspect of our business. Together, we drive changes that benefit our business, suppliers, customers, and the environment. We believe that transparency is essential to advancing sustainability across our industry, and request that our suppliers provide key environmental data.

Our priorities

Reduce production suppliers' environmental footprint

- Measure, report, and motivate reduction of supplier environmental impacts
- Build supplier capabilities to reduce GHG emissions through energy management and renewable energy use
- Drive supplier transparency and goal setting
- Elevate supply chain environmental standards through collaboration

Decrease product transportation-related GHG emissions

- Enhance our logistics networks
- Prioritize transportation modes with lower GHG emissions
- Improve shipping densities through optimization programs and innovative packaging
- Advance standard GHG emissions calculation process across transportation industry

Reduce nonproduction suppliers' environmental impacts

- Reduce environmental impacts through collaboration
- Support environmental reporting practices

2016 highlights

21%

decrease in supply chain GHG emissions intensity compared to 2010²

16%

decrease in product transportation GHG emissions compared to 2010

4%

increase in strategic nonproduction suppliers publishing environmental reports

Our goals

Supply chain GHG emissions intensity

↓10%

Reduce first-tier production supplier and product transportation-related GHG emissions intensity 10% by 2025, compared to 2015³

Supplier CO₂e emissions

↓2 million tonnes

Help suppliers cut 2 million tonnes of carbon dioxide equivalent (CO₂e) emissions between 2010 and 2025⁴

Greenhouse gas (GHG) emissions from our supply chain account for 45% of our overall [carbon footprint](#) and 22% of our total [water footprint](#). Wherever possible, we advance industry-leading practices that reduce supplier costs and risks while decreasing GHG emissions and other environmental impacts. Our suppliers play a pivotal role in our transition toward a circular economy. We collaborate to remove waste from the supply chain, improve efficiency, and create closed loops to capture and reuse valuable materials.

For more information about how we work with suppliers, see [Supply chain responsibility](#) and [Supply chain responsibility: Our approach](#).

We hold our suppliers to high standards in support of our sustainability commitments. All suppliers must follow the [HP Supplier Code of Conduct](#) and we track conformance through rigorous internal and third-party audits. We evaluate suppliers on key areas including environmental permits and reporting, air emissions, pollution prevention and resource reduction, use of hazardous substances, wastewater, and solid waste generation.

HP's social and environmental responsibility (SER) scorecard integrates HP's expectations on a range of SER factors into our procurement team's supplier management process. This incentivizes suppliers to improve environmental performance beyond the requirements in our Supplier Code of Conduct, such as transparent disclosure of environmental impacts and efforts to reduce GHG emissions and energy consumption. Our sustainability and procurement staff work closely to help suppliers meet our high expectations. See [Supply chain responsibility](#) for more detail.

Beyond our own value chain, we elevate expectations for suppliers throughout the IT industry. In 2016 and 2017, we participated in the Electronic Industry Citizenship Coalition (EICC) Environmental Sustainability Working Group's ongoing effort to update and strengthen the EICC Code of Conduct.

Greenhouse gas emissions

Helping suppliers cut 2 million tonnes of CO₂e emissions

We are dedicated to helping our first-tier production suppliers reduce their carbon footprint, and to decreasing emissions related to product transportation. Through December 2015 (the most recent year data is available), first-tier production supplier and product transportation-related GHG emissions intensity decreased by 21% compared to 2010.⁵ Moving forward, we have reset our supply chain GHG emissions intensity reduction goal using 2015 as our new baseline. WWF has publicly supported this goal, confirming the rigor of our goals-setting process. [Learn more](#).

We also made progress toward our goal of helping suppliers reduce their carbon footprint by cutting 2 million tonnes of CO₂e emissions between 2010 and 2025. As of December 2016, suppliers achieved 47% of this target through new and ongoing energy efficiency projects, energy management programs, and renewable energy use. Combined, these efforts saved more than 940,000 tonnes of CO₂e emissions through 2016.

**\$73
million**
 saved since 2010 through
 supplier GHG emissions
 reduction programs

Supplier GHG emissions performance, 2010–2016*



* See notes *, **, †, and †† on [page 71](#).

For more detail on supply chain GHG emissions, including production suppliers, product transportation, and nonproduction suppliers, see [Data](#). View HP's [2016 carbon footprint](#).

Moving forward, HP will continue to:

- Incentivize suppliers to set and achieve their own GHG emissions-reduction goals
- Spur the adoption of renewable energy by suppliers to decarbonize the energy they use
- Extend energy management and efficiency capability building programs and contribute to the development of best practices for the IT industry
- Guide suppliers to improve the accuracy, completeness, and transparency of GHG emissions calculations and reporting
- Drive adoption of new product transportation industry-wide GHG emissions tracking methodologies

Production suppliers

Production suppliers provide materials and components for product manufacturing and assemble HP products for global distribution to customers. To complement our efforts to make the quality, sustainable products our customers seek, we engage more than 95% (by spend) of these suppliers on reducing their environmental impact. This depth of engagement raises supplier awareness and knowledge of sustainability and promotes the level of transparency we view as key to progress.

In 2015, first-tier production suppliers generated 3 million tonnes of Scope 1 and Scope 2 CO₂e emissions attributable to HP, a 3% increase compared to 2014. This reflects a small rise in emissions intensity among several of our larger suppliers as well as increased orders for products which are relatively GHG intensive to manufacture. Encouragingly, 93% of our production suppliers (by spend) had set GHG emissions reduction-related goals by year's end, nearly the same as in 2014, but 25% more than in 2013.



HP was one of 29 companies globally out of more than 3,300 assessed by CDP to make the inaugural [supplier engagement leaderboard](#).

93%

of HP suppliers (by spend)
had GHG emissions-reduction
targets in place in 2015

HP encourages suppliers to use renewable energy as a strategy to reduce GHG emissions. In 2015, 47% of suppliers (by spend) reported using renewable energy, up from 28% in 2013.

In addition, we request Scope 3 environmental data from suppliers that represent over 95% of HP's spend. These companies have varying levels of environmental management maturity. Moving forward, we will continue to help suppliers enhance the accuracy and completeness of their GHG emissions calculations and reporting, including the use of renewable energy.

Engaging suppliers to reduce GHG emissions

Our supplier Energy Efficiency Program (EEP) in China and Southeast Asia is a leading initiative for reducing production suppliers' utility costs and environmental footprint. Since 2010, more than 200 first-tier and sub-tier supplier sites in China and Southeast Asia have joined and benefited from EEP. Implemented in partnership with nongovernmental organizations such as BSR, the World Resources Institute, and WWF, the program helps suppliers to build capabilities, improve energy efficiency, and explore the use of renewable energy, resulting in reduced GHG emissions and water use as well as cost savings. In 2016, 44 first-tier suppliers submitted new operational efficiency plans with potential combined annual savings of more than 143,600 MWh of energy, and 1 million cubic meters of water from 300 projects. These included initiatives to install renewable energy, adopt ISO 14064 and 50001 standards, install energy and water metering systems, and complete energy audits. Since 2010, participants in this program have saved a cumulative \$73 million and contributed to preventing more than 940,000 tonnes of CO₂e emissions from product manufacturing and transportation.

HP also brings suppliers together to explain our environmental expectations, provide training, and share best practices. At our 2016 environmental summit in Chongqing, China, 42 suppliers joined representatives from government, WWF, and HP to discuss future plans in areas including energy efficiency, renewable energy, and green manufacturing.

During the year, we also launched a Strategic Energy Management pilot with NRDC, the China National Institute of Standardization, local agencies, and suppliers in Suzhou, China. The three-year trial will enhance suppliers' operations, technology, and continuous improvement processes related to energy management, with a goal to establish best practices and national guidelines for facility energy management across China's IT sector. HP's supplier Chicony Electronics Co., a participant in the initiative, implemented heat recovery, LED lighting, and water efficiency projects in 2016 that will save an estimated 1,800 tonnes of CO₂e emissions, 52,000 cubic meters of water, and \$300,000 annually. Chicony is evaluating installation of solar energy at the site in 2017 to further reduce GHG emissions.

Product transportation

On a typical day, more than 1.5 million products ship between our manufacturing sites, distribution centers, and customers. Decreasing the carbon footprint of this global transportation activity is essential to reducing our supply chain GHG emissions. In 2016, product transportation resulted in 1.2 million tonnes of CO₂e emissions. HP worked to improve performance and advance industry standards in three key areas:



More efficient supply chain network

We optimize our global logistics network at every opportunity—improving efficiency, cutting costs, and reducing environmental impact. Whenever feasible, we consolidate shipments and send HP products directly to customers or the distribution centers closest to them. We also work to identify new routes that decrease overall emissions and costs.

We continue to use SmartWaysm partners for 100% of our products shipped by truck in the United States and Canada. The U.S. Environmental Protection Agency (EPA) program improves road transportation efficiency and reduces GHG emissions. In 2016, HP won its fifth, and third consecutive, SmartWaysm Excellence Award in the large shipper category.

Less environmentally impactful transportation

Shifting from air transportation to less GHG-intensive modes such as ocean freight reduces our carbon footprint. By doing so, in 2016 we prevented the release of 35,000 tonnes of CO₂e emissions related to notebook shipments from China to the Americas, Asia, and Europe.

Smaller and lighter packaging can also reduce GHG emissions from transporting our products, by increasing shipping densities. Read more about our innovative [Packaging](#) solutions.

Leading improvements across the industry

Accurately and consistently measuring GHG emissions is critical to making global progress toward a low-carbon economy. When freight suppliers generate GHG emissions reports, many rely on standard fuel efficiency calculations rather than actual fuel used. This is a challenge to understanding how emissions vary on a regional and global basis, and to quantifying emissions savings from sustainability upgrades.

In 2016, we joined the Smart Freight Centre-led Global Logistics Emissions Council (GLEC) to develop the Global Logistics Emissions Framework, which standardizes the global emission calculations for the transportation industry and incorporates fuel usage. This new methodology provides more accurate data for analysis and improves comparability across companies and industries. The GLEC framework was accepted by the World Resources Institute GHG Protocol and by CDP as a method for CO₂ calculations. Moving forward, we are requesting that our product transportation suppliers use the GLEC framework for HP's 2017 footprint calculations.

To further advance this area, HP also worked with the following organizations to reduce GHG emissions across our global supply chain: Clean Cargo Working Group, Green Freight Asia, the International Air Transport Association, the United Nations Climate & Clean Air Coalition, and U.S. EPA SmartWaysm.

Nonproduction suppliers

Nonproduction suppliers provide HP with critical goods and services that are not directly related to product manufacturing. We source staffing, telecommunications, and travel (excluding product transportation) from a variety of industries. HP collaborates with some of these suppliers, based on size and sector, to provide training, improve reporting, and reduce environmental impact.

In 2015, our nonproduction suppliers reported 240,000 tonnes of CO₂e emissions attributable to HP. For this same year, the percentage of HP nonproduction strategic suppliers that produced environmental reports increased by 4%. Moving forward, HP will build supplier partnerships to standardize emissions reporting and decrease emissions.

Waste

Conserving resources and reducing waste

Supporting our production suppliers' efforts to generate less waste reduces the environmental footprint of HP products and accelerates progress toward a circular economy.

In 2015, our production suppliers generated 105,000 tonnes of nonhazardous waste, 15% less than in 2014, and 48,000 tonnes of hazardous waste, a 7% increase. We request waste generation data from more than 95% of production suppliers (by spend). Through the end of 2015, 57% of our production suppliers (by spend) set waste-related goals.

We are working to improve the coverage and accuracy of waste data our suppliers provide. For guidance on waste management and minimization best practices, we refer suppliers to the Global Social Compliance Programme (GSCP) Environmental Reference Tools.

For more detail, see [Data](#).

Advancing toward a circular economy in Brazil

In Brazil, where we have substantial manufacturing operations, HP has worked with suppliers since 2006 to drive progress toward a circular economy. In 2016, we won two prominent Brazilian environmental awards, Guia Exame de Sustentabilidade and Premio Eco, for our efforts. The program has three elements, all designed to support closed loop recycling and zero waste to landfill.

Innovation and Recycling Center: In 2008, we established an Innovation and Recycling Center adjacent to our key manufacturing facility, which produces 100% of HP PCs and printers made in Brazil. The center recycles end-of-service HP hardware, printing supplies, and accessories, enabling the reuse of recycled raw material in new products. Through these efforts, most of the waste generated by our long-standing manufacturing partner remains in our own local supply chain and is kept from landfill. We collected and recycled more than 720 tonnes of end-of-service HP products at this location in 2016.

Zero Waste program:⁶ Since 2013, we have worked with other Brazilian partners to conserve raw materials by reusing the waste generated in manufacturing and transporting HP products in local supply chains. For example, our suppliers reused more than 500 tonnes of wooden pallets and more than 497,000 cardboard boxes.

720+
tonnes

of end-of-service HP products
were collected and recycled
at Brazil's Innovation and
Recycling Center

SmartWaste returns tracking: The SmartWaste project enables faster and more effective recycling solutions. We use radio-frequency identification (RFID) technology in all HP products manufactured in Brazil, which stores information about the manufacturing of the product. This enables us to better manage end-of-service HP electronic equipment, by helping us to determine how long products were used and how the materials in returned products can be most effectively reused and recycled. This project also provides insights on what features best support our transition to a circular approach.

Water

Better measurement improves management

Many of our suppliers operate in regions around the world where water stress is a growing threat. We work with our supplier base to improve water management in their operations and drive responsible withdrawal and discharge.

In 2015, supplier water withdrawals equaled 44 million cubic meters, 10% more than in 2014. This reflects increased proportionate spending on products which are relatively water intensive to manufacture as well as variations in the data reported by suppliers. We request water withdrawal data from more than 95% of our production supplies (by spend), and are strengthening the coverage and accuracy of data provided. Through the end of 2015, 80% of HP production suppliers (by spend) set water withdrawal-related goals.

HP is a member of the GSCP and uses its Environmental Reference Tools to help suppliers improve water use practices and other aspects of environmental performance. We use the [World Business Council for Sustainable Development Global Water Tool](#) to assess risks to local environments and communities across our supplier base, from facilities with water-intensive operations in water-stressed locations. In 2017, we will add a second assessment tool to more robustly identify our supply chain water risks and focus our efforts.

For more detail, see [Data](#). View HP's [2016 water footprint](#).

Supply chain transparency

HP is committed to, and recognized for, transparent disclosure of our supply chain performance. The Corporate Information Transparency Index, developed by the Institute of Public and Environmental Affairs (IPE) and NRDC, evaluates the environmental practices of global brands' supply chains in China. In 2016, HP was ranked seventh of 29 global IT companies and 17th among all 198 brands assessed.

To support supplier compliance and transparency, and to ensure that our suppliers met local laws relating to air, water pollution, and waste, in 2016 HP cross-checked supplier sites representing 95% of HP's spend against IPE's database of environmental violations. We also collaborated with four first-tier manufacturing suppliers in China, to ensure that their sub-tier suppliers also comply with local environmental laws. This review of 758 sub-tier suppliers uncovered 14 firms that had violated local law. Through December 2016, 13 suppliers provided corrective and preventive action plans or monitoring



reports to demonstrate that the breaches had been addressed. They also provided this information directly to IPE or through the institute's audit process. To resolve the remaining violation by a sub-tier supplier, we are still working closely with the first-tier supplier involved.

Pollutant release and transfer registers (PRTR) involve companies submitting to an authority inventories of substances released. The authority then makes this data available to the public. In 2016, HP collaborated with IPE to engage nine final assembly sites in China to submit through IPE's PRTR system. In 2017, we plan to expand this work to more final assembly suppliers in China.

In 2017, HP became a member of the [CDP supply chain program](#). We are strengthening our robust engagement with suppliers on critical environmental issues by adding our voice to CDP's call for disclosure and action. To further promote transparency, we also request our suppliers to make their CDP responses public, and are emphasizing our desire for disclosure on important issues such as GHG emissions, water risks and use, energy consumption, and adoption of renewable energy.



Continually improve our performance

HP is dedicated to addressing climate change by minimizing our carbon footprint across the value chain, including our operational impacts. While greenhouse gas (GHG) emissions associated with HP's offices and manufacturing facilities, transportation fleet, and employee commuting and business travel together represent just 2% of our footprint, modeling sustainable operations also helps us to lead change in our industry and beyond.

Our [bold goals](#) are designed to drive improved environmental performance at our owned and leased facilities around the world, while saving money and decreasing risk. We accelerate progress toward a [circular economy](#) through on-site innovations that reduce waste and preserve natural resources, and by using renewable energy to power our operations.

Employee engagement and buy-in is critical to achieving our operational sustainability goals. In 2016, we hosted an in-person Sustainability in the Workplace session at our site in Boise, Idaho, United States, to communicate HP's energy, waste, and water programs. In 2017, we plan to expand the initiative to additional sites. We are also exploring ways to communicate real-time metrics to drive engagement in our energy, waste, and water programs.

About our operational data

All data reported in this section refers to HP operations through October 31, 2016. As of that date, HP owned and leased 225 sites in 67 countries. This report includes invoice data from 61 sites, including administration and support, manufacturing plants, research and development facilities, and warehouse operations. These 61 sites represented 77.4% of HP's total floor space of 2.11 million square meters. Data was extrapolated for the remaining floor space based on intensity factors derived from directly tracked usage, unless stated otherwise.



Our priorities

Reduce GHG emissions

- Optimize energy efficiency at all HP sites
- Generate on-site renewable energy
- Evaluate utility-scale off-site power purchase agreement (PPA) renewable energy contracts
- Purchase renewable energy from utility suppliers
- Promote more efficient employee commuting and auto fleet

Decrease energy consumption and costs

- Prioritize energy efficiency in new construction
- Implement energy efficiency projects at legacy sites
- Install submeters to identify opportunities for reduction
- Perform virtual energy audits
- Implement fault detection and diagnostics software
- Seek competitive bids for deregulated energy sources

Reduce water consumption

- Prioritize water efficiency in new construction
- Optimize water-intensive manufacturing processes
- Install sustainable landscaping
- Deploy smart metering at new and legacy sites
- Establish potable water conservation plan for key sites

Decrease solid waste

- Minimize waste generation
- Employ cost-effective reuse and recycling
- Increase landfill diversion rate
- Pursue Green Business Certification Inc. Zero Waste Certification at corporate headquarters

2016 highlights

5%

decrease in Scope 1 and Scope 2 GHG emissions from operations compared to 2015

6%

reduction in energy use compared to 2015

3%

decrease in potable water consumption compared to 2015

90.1%

nonhazardous waste landfill diversion rate

Our goals

Scope 1 and 2 GHG emissions

↓25%

reduction in Scope 1 and Scope 2 GHG emissions from global operations by 2025, compared to 2015

Renewable electricity

100%

renewable electricity in our global operations, with a goal of 40% by 2020

Potable water consumption

↓15%

reduction in potable water consumption in global operations by 2025, compared to 2015

EHS management and compliance

Delivering best practice across our facilities

HP owns and leases facilities around the world. Our [Environment, Health, and Safety \(EHS\) Policy](#) and EHS management system guide site managers in using best practices to limit environmental impacts, meet our internal standards, and comply with all applicable laws and regulations. We investigate all allegations that our facilities failed to comply with applicable laws, and take corrective action where needed. Newly acquired companies must implement our EHS management system as a part of their integration.

For information about how we manage employee health and safety at our facilities, see [Health and safety](#).



■ ISO 14001
 ■ LEED
 ■ Green Mark

Our sustainable facilities

We pursue environmental management and green building certifications at HP owned and leased facilities worldwide when feasible. In 2016, 16 facilities continued to be a part of our global ISO 14001 certificate, the international standard for environmental management systems. Three locations have LEED certification and one has Green Mark certification.

Greenhouse gas emissions¹

Energy savings and green power reduce our climate impact

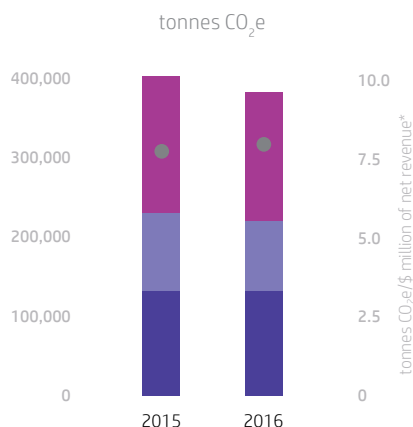
The vast majority of GHG emissions from operations are related to the energy used to power our facilities. To save money, drive progress toward our goals, and reduce our climate impacts, HP focuses on efficient energy use and a greater reliance on renewable electricity. We pursue the following strategy:

- Aggressively [reduce energy consumption](#) by optimizing efficiency and launching new efficiency projects.
- Increase on-site generation of [renewable power](#).
- Procure off-site [renewable power](#) to offset facility emissions from brown power, including through renewable energy credits (RECs) and power purchase agreements (PPAs).

In 2016, HP's global operations produced 383,700 tonnes of Scope 1 and Scope 2 carbon dioxide equivalent (CO₂e) emissions, 5% less than our 2015 baseline. This equaled 8.0 tonnes of CO₂e per \$ million of net revenue, a 2% increase from 2015 due to falling revenue. The key driver for this reduction was a 6% decrease in energy consumption globally (see Energy efficiency section below). These gains occurred despite a small increase in GHG emissions in Asia Pacific and Japan due to a new manufacturing facility in Malaysia.

To reduce HP's future emissions in Asia Pacific and Japan, we are pursuing on-site solar PPAs in Malaysia and Singapore as well as off-site solar PPAs in India. While we reduced electricity use significantly at some sites, such as Dublin, Ireland, and Palo Alto, California, United States, electricity used at these locations is generated from sources that have no GHG emissions, so the reductions did not reduce our total emissions. To continue to make progress toward our goal of reducing Scope 1 and Scope 2 GHG emissions from global operations 25% by 2025, compared to 2015, we will further increase our renewable energy use at locations worldwide. WWF has publicly supported this goal, confirming the rigor of our goals-setting process. [Learn more](#).

Scope 1 and Scope 2 GHG emissions from operations, 2015–2016



■ Americas
■ Europe, Middle East, and Africa
■ Asia Pacific and Japan
● GHG emissions intensity (tonnes CO₂e/\$ million of net revenue)*

* Historical emissions-intensity values were calculated using HP's annual revenue as characterized in financial reporting and Scope 1 and Scope 2 GHG emissions.

See [Data](#) for more detail.

Sources of GHG emissions from operations, 2015–2016

percentage of total Scope 1 and 2 emissions

Sources of GHG emissions		2015	2016
Scope 1	Natural gas	7%	7%
	Diesel/gas/oil	0%	0%
	Transportation fleet	8%	8%
	Refrigerants (HFCs)	1%	1%
	Perfluorocarbons	1%	1%
Scope 2	Purchased electricity for operations	83%	83%
	District cooling and heating (purchased) for operations	0%	0%

Learn more about how we reduce GHG emissions across our business in [Supply chain environmental impact](#) and [Products and solutions](#).

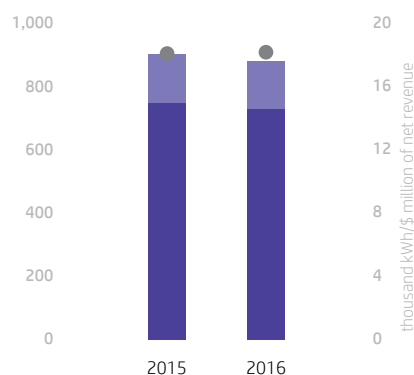
View [full carbon footprint](#) for 2015–2016 and details about our methodology in the [HP carbon accounting manual](#). See our available [CDP climate submissions](#).

Energy efficiency

Energy use is a significant operating expense for HP and the main driver of our climate impact from operations. Our operations consumed 879 million kWh of energy in 2016, 6% less than our 2015 baseline. Energy intensity equaled 18,200 kWh per \$ million of net revenue, 1% more than 2015 due to decreasing revenue. Key factors driving reduced absolute energy use during the year included efficient design in new construction and investing in energy efficiency at existing sites. Highlights from 2016 included:

- **Retro-commissioning:** Projects completed at the beginning of the year improved the efficiency of existing mechanical and electrical infrastructure at three large HP facilities in Boise, Idaho, United States; Corvallis, Oregon, United States; and Singapore, saving 8.8 million kWh annually.
- **LED lighting upgrade:** Six sites in three countries updated fluorescent fixtures with LED tubes, saving 5.5 million kWh of energy and \$482,000 a year. In 2016, LEDs became the standard light fixtures for all new HP construction projects moving forward.
- **Smart building project:** In Malaysia, we completed construction of a new manufacturing facility featuring LED lighting, daylight harvesting, submetering, occupancy sensors, and high-efficiency HVAC systems. This smart building will use 12% less energy than a standard manufacturing facility.
- **Energy audits:** Through ASHRAE (American Society of Heating, Refrigerating, and Air Conditioning Engineers) Level 2 energy audits, we identified opportunities to save an estimated 7.2 million kWh of energy per year across our facilities in Barcelona, Spain; Kiryat Gat, Israel; Pritech Park, India; San Diego, California, United States; San José, Costa Rica; and Tuas, Singapore. Conservation measures being implemented include electrical submetering, continuous retro-commissioning with fault detection software, and high-efficiency refrigerant replacements. HP also initiated a virtual audit program that engages our on-site operations employees to provide high-level energy audits.

Energy use from operations, 2015–2016



■ Stationary combustion (natural gas and diesel)
 ■ Electricity*
 ● Energy intensity (thousand kWh/\$ million of net revenue)**

* Includes purchased electricity and electricity generated on-site.

** Historical energy-intensity values were calculated using HP's annual revenue as characterized in financial reporting and direct and indirect energy use.

See [Data](#) for more detail.

Renewable energy

By shifting toward renewable, carbon-neutral energy, we can stabilize our energy costs and dramatically reduce GHG emissions from our operations. We currently operate five sites in four countries with 2.5 MW of combined installed solar capacity. In 2016, renewable electricity purchased and generated on-site accounted for 105 million kWh of electricity globally, 14% of our total consumption and making progress toward our goal of 40% by 2020. Our year-over-year renewable energy use decreased 18% from 2015, largely due to decreased electricity consumption at sites that use 100% renewable electricity.

In 2017, we will continue to evaluate a utility-scale off-site power purchase agreement in the United States, a feed-in tariff contract for solar energy at our Palo Alto, California, United States, corporate headquarters, and four solar power purchase agreements in Malaysia and Singapore. HP is also exploring renewable energy opportunities in India.

To support these efforts, in 2016 we joined RE100, a global initiative led by the Climate Group of top businesses committed to using 100% renewable electricity to lead the transformation of global energy markets. In 2015, to help scale broader private sector adoption of renewable energy, we joined 62 other companies and signed the [Corporate Renewable Energy Buyers' Principles](#). These outline the challenges businesses face in reducing the carbon intensity of energy suppliers, and list six factors that would speed corporate adoption, such as access to longer-term, fixed-price renewable energy, improved choice in renewable energy procurement options, and cost competitiveness between traditional and renewable energy rates.

Business travel, commuting, and auto fleet

HP provides low-impact travel choices for all our employees, through collaboration with our travel providers, planning tools, and employee incentive programs. Our vehicle rental vendors provide U.S. Environmental Protection Agency (EPA) SmartWay®-certified models when available. For major events, we offer organized rides in large cars, vans, or shuttles. During 2016, 71% of HP employee room nights were spent at preferred hotels that meet LEED®, ISO 14001, or Nordic Swan environmental standards. To decrease employee need to travel, we encourage the use of virtual collaboration tools.

Employee business travel and commuting generated 60,000 and 200,000 tonnes of CO₂e emissions respectively in 2016. See [Data](#) for more detail. To reduce the impacts of local travel to and from HP offices, we support car sharing and use of electric and more efficient vehicles. At our Palo Alto, California, United States, headquarters we offer a Zipcar vehicle share option. At that location as well as our site in New York, New York, United States, we also offer a pretax commuter benefits program. In two countries, we provide 35 electric vehicle charging stations for employee use, and we are exploring deploying stations at sites globally in the coming years.

Our transportation fleet generated 31,000 tonnes of CO₂e emissions in 2016. See [Data](#) for more detail. To support HP's [GHG emissions reduction goal from operations](#), we plan to reduce GHG emissions from HP owned or leased auto fleet vehicles by 10% by 2025, compared to 2015. In Europe, we reduced fleet average GHG emissions from 120 g CO₂e/km in 2015 to 117 g CO₂e/km in 2016. By consolidating to a new fleet management service across EMEA, HP will reduce costs and improve transparency across our fleet. Moving forward, we will strengthen our policy around fleet car selection to offer more fuel-efficient baseline vehicles.

Waste

Reduce, reuse, and recycle

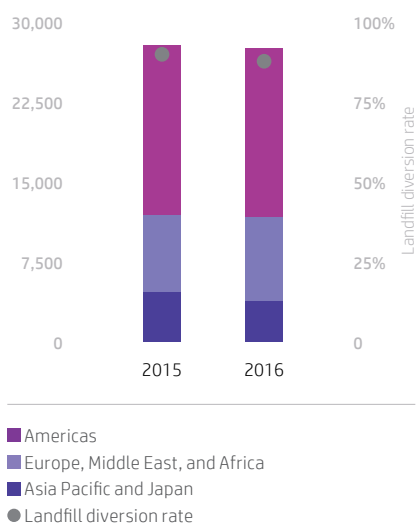
Although our facilities around the world do not generate large amounts of waste, we employ a global policy of “reduce, reuse, and recycle” that supports our shift toward a circular economy.

In 2016, HP generated 27,800 tonnes of nonhazardous waste, down 1% compared to 2015. The company achieved a 90.1% landfill diversion rate for nonhazardous waste globally.

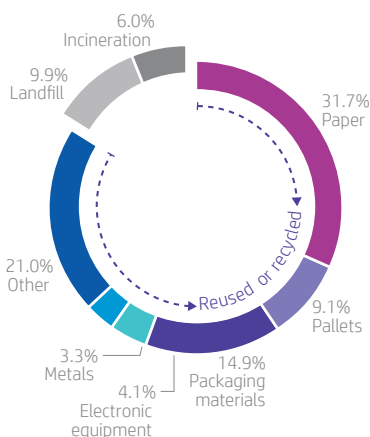
The company generated 5,560 tonnes of hazardous waste during the year. The main hazardous waste we generate is liquid from ink manufacturing facilities. These manufacturing sites prioritize waste management options with low environmental impacts and only use disposal as a last resort. (Although ink manufacturing is a source of hazardous waste, HP ink cartridges used by customers and in our offices can be recycled, and are considered nonhazardous in many of our major markets.) We reuse electronic equipment when appropriate, and when necessary, recycle it responsibly through the same programs we offer our customers. See [Product repair, reuse, and recycling](#) for details.

HP launched the Zero Waste certification process in 2017 for our site in Palo Alto, California, United States, through Green Business Certification Inc. and the United States Green Building Council. The site diverts more than 90% of its waste from landfill annually. In 2017, we are reviewing the potential to certify additional sites globally.

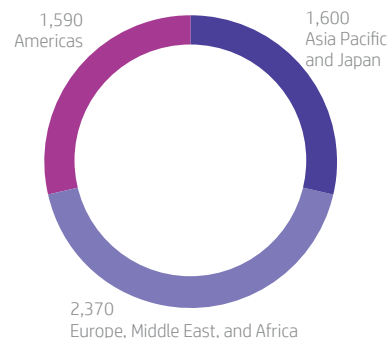
Nonhazardous waste, 2015–2016
tonnes



Nonhazardous waste composition, 2016*
percentage of total



Hazardous waste, 2016
tonnes

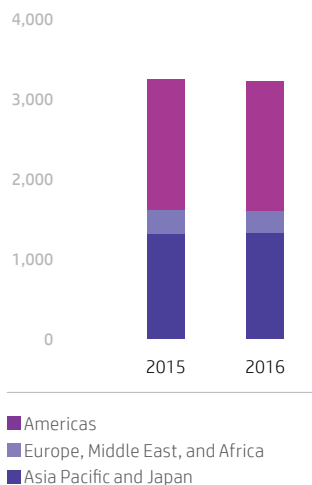


* HP sites report nonhazardous waste volumes and disposition based on information provided by our waste disposal vendors. For sites unable to directly track nonhazardous waste, we estimate volumes and disposition using intensity factors based on similar operations.

See [Data](#) for more detail.

Water consumption, 2015–2016

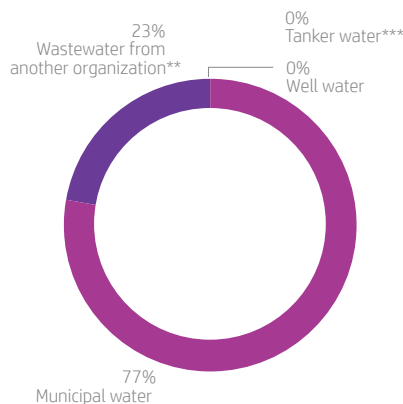
thousand cubic meters



See [Data](#) for more detail.

Water consumption by source, 2016*

percentage of total



* Direct use of surface water and rainwater is insignificant and not included in data reported. Well water is about 0.1% of total so is not visible on the graph.

** NeWater is ultra-purified wastewater used in manufacturing operations in Singapore.

*** Tanker water is well water that is delivered to the site by tanker truck.

Water

Conserving water, especially where it matters most

Although our operations are not water intensive, we do all we can to reduce our consumption, especially in water-stressed locations. In 2016, HP consumed 3,224,000 cubic meters of water, mainly for use in buildings, cooling, landscaping, and production of high-purity water for manufacturing. Water use decreased globally by 1% compared to 2015. At our four largest consuming sites in water-stressed areas, consumption decreased by 1% year over year. HP recycled and/or reused 75,000 cubic meters of water globally in 2016.

Through 2016, potable water consumption at HP sites globally decreased by 3% compared to 2015.² To drive continued progress, we have established a new goal to reduce potable water consumption in global operations by 15% by 2025, compared to 2015.

To reduce and recycle water used at our facilities, we employ smart building practices, sustainable landscaping, infrastructure upgrades, and gray water reuse, among other approaches. Key 2016 highlights included:

- Introduced sustainable landscaping features at our Boise, Idaho, and Palo Alto, California, United States, sites. We replaced non-indigenous turf grass with native species and converted to drip-irrigation, reducing water use and costs. Each year, the Boise project will save enough water to fill 33 Olympic-size swimming pools.
- Implemented innovative process updates to the deionized water system in Singapore to reduce the amount of rejected water. These enhancements will save the equivalent of 35 Olympic-size swimming pools of water annually.
- Installed smart meters to reduce water waste and avoid potential water damage to buildings at HP sites in Barcelona, Spain; Bucharest, Romania; Milan, Italy; and Sofia, Bulgaria. This technology provides real-time consumption data, which we use to identify leaks, conduct predictive analytics to adjust supply, and foresee and prevent any irregularities. In 2017, we are exploring adding smart water meters in Boise, Idaho and Corvallis, Oregon, United States; Singapore; and Beijing, China.

HP uses the [WBCSD Global Water Tool](#) to assess water scarcity and identify facilities in water-stressed locations for priority attention.

See our available [CDP water submissions](#).

Wastewater

Wastewater is not a significant environmental aspect of HP's operations. Our six imaging and printing product-manufacturing facilities generate process effluents that are pretreated, strictly monitored, and discharged under government-issued permits to municipal wastewater plants for further treatment. We implement procedures to prevent unauthorized discharges of chemicals to our facility wastewater systems and ensure that these sites do not discharge wastewater directly to surface water or to groundwater.



Products and solutions

Creating technology that makes life better for everyone, everywhere

Making products that improve people's lives has been our driving purpose since HP began. From [transforming education](#) and ensuring [customer privacy and security](#) to [advancing healthcare](#), our computing and printing products enhance the lives of millions of people worldwide, every day.

Our priorities

Improve product sustainability through design

- Use less material, increase recycled and recyclable content, and use materials with lower environmental impact
- Reduce the energy required to manufacture and use HP products
- Increase product durability, repairability, and upgradability

Deliver service models that increase value and reduce environmental impacts

- Develop and expand service-based business models to more customers with more products
- Customize offerings to meet diverse customer needs
- Increase product longevity through support and repair services

Develop disruptive sustainability solutions

- Drive the analog-to-digital printing transformation
- Enable local, faster, and more efficient manufacturing and prototyping through 3D printing
- Embed sustainability further into R&D agenda

2016 highlights

Up to 56%

less material used in HP Elite x3 than the products it replaces¹

57%

reduction in materials consumption per printed page on average through HP Instant Ink²

HP Jet Fusion 3D 4200/3200

prints high-quality parts up to 10 times faster³ and at a lower cost⁴ than current 3D print systems on the market

Our goals

Product GHG emissions intensity

↓25%

Reduce the GHG emissions intensity of HP's product portfolio by 25% by 2020, compared to 2010⁵

Paper and paper-based product packaging

Zero deforestation

Ensure that all HP brand paper and paper-based product packaging⁶ will be derived from certified and recycled sources by 2020

Manufacturing and customer use of our products account for 53% of our carbon footprint. For this reason, product design is the best way to improve our environmental performance and that of our customers. We work to improve the performance of each new generation of products while using less material and decreasing energy consumption, and have set a goal to reduce the GHG emissions intensity of HP's product portfolio by 25% by 2020, compared to 2010. By reinventing the way we design, produce, and deliver our products, we are working to decouple our growth from consumption and transition toward a low-carbon, resource-efficient [circular economy](#).

HP product portfolio

Industry-leading, sustainable innovation



HP Elite x3.

From ultra-light notebooks to digital presses and 3D printers, our product portfolio combines innovation, performance, craftsmanship—and sustainability.

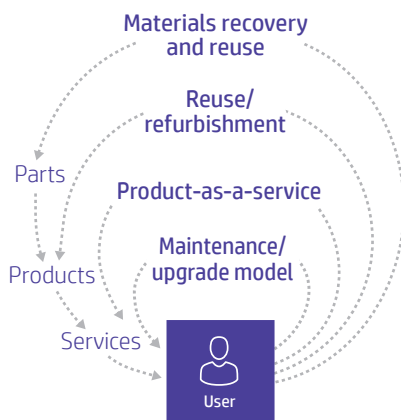
- From tablets to laptops to workstations, our personal systems products enable customers to achieve their goals sustainably while providing the security, durability, and energy and materials efficiency they expect and depend on.
- As the global leader in desktop and enterprise printing, we continue to redefine the marketplace, delivering sustainable next-generation solutions and service-based models to meet the needs of our customers globally.
- Our commercial and industrial graphics printing solutions are driving the analog-to-digital revolution, transforming our customers' supply chains and better matching supply with demand across the 2D printing and publishing industries, as well as other commercial and industrial sectors such as packaging and labeling.
- With the launch of HP Jet Fusion 3D 4200/3200, our first 3D printing product, HP is driving broader adoption of this disruptive technology that streamlines the prototyping process, digitizes traditional supply chains, improves the economics of short-run manufacturing, and avoids waste associated with overproduction.

Designing for the circular economy

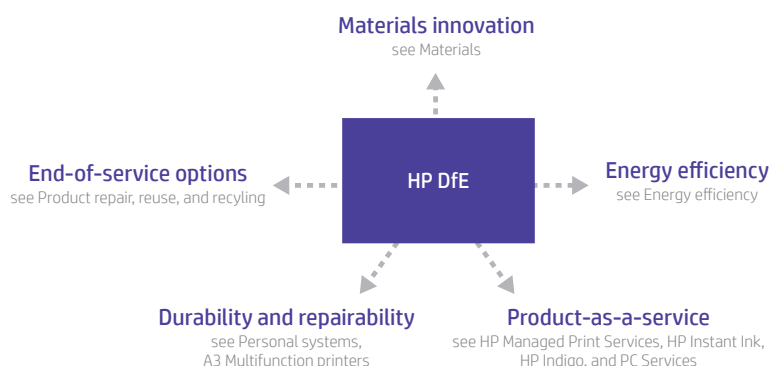
Ongoing innovation for society and the environment

Our Design for the Environment (DfE) program establishes the approach, tools, and processes that guide product design teams and environmental product stewards to drive ongoing improvement.

HP uses formal management systems and rigorous frameworks in our product design processes. Product design and development operations for our HP LaserJet Enterprise Solutions, HP Inkjet Printing Systems, and Personal Systems product groups are [ISO 14001 certified](#). This demonstrates that our entire design process across these product areas adheres to the environmental management systems standard. We audit our design and related compliance activities, benchmark against industry best practices, and, where appropriate, seek external environmental certification for our products.



HP Design for the Environment focus areas



Our DfE program is an important driver of business value. In 2016, customers with sustainable purchasing criteria (including criteria related to eco-labels) represented a total of more than \$14 billion of existing and potential business revenue.

Longer-lasting products benefit customers and the environment



Innovation in IT is moving at lightning speed. Customers often feel compelled to purchase the latest technology rather than upgrade their current PCs, printers, or tablets. HP gives customers more options by designing devices that are easier than ever to repair and upgrade, which extends their useful lives while keeping costs down.

We provide free service manuals for most products, supplemented with service options and warranties. [HP Care Pack Central](#) offers comprehensive options for extended warranties and repair services for PCs and printer products. Customers can use [iFixit](#) to learn how to repair a wide range of HP products, and [HP Customer Self Repair Services Media Library](#) provides easy-to-access tutorials and instructions on how to repair our devices easily and keep them running optimally. With [HP Part Surfer](#) customers can simply replace and upgrade missing or damaged PC and printer parts. Customers can access diagnosis and repair services from certified technicians through our worldwide [database](#) of authorized support providers.

For more on how we help customers make our products last longer, see [Personal systems](#), [Desktop and enterprise printing](#), and [Commercial and industrial graphics printing solutions](#).

Design for the future

Research and development (R&D) is a key driver of our business success and our promise to customers to invent and reinvent technology that can change the world. In 2016, we spent \$1.2 billion on ongoing product development and creating the transformative and disruptive technologies of the future. We invest in areas where we can make the greatest impact, and integrate sustainability into our research agenda. Taking into account global socioeconomic, demographic, environmental, and technological trends, we work to predict and shape tomorrow's markets.

We use a portfolio approach to balance risk, reward, and timeline. Research geared toward improvements that have an impact on our existing business units represents the majority of our efforts, and has the highest chance of success. We describe numerous examples throughout this report, such as [HP JetIntelligence](#) toner cartridge technology, which substantially reduces GHG emissions, and [HP Sure Start](#), which helps protect printers from cyberattacks. We also focus on emerging technologies that will likely become a new business if successful, as happened with [3D printing](#).



HP Labs.

Fundamental research, which is high-risk and has the longest timeframe, has the potential to address unmet human needs and launch markets that do not yet exist, unleashing great value for customers and society. For example, our HP Life Sciences Research Group aims to significantly advance Surface Enhanced Raman Spectroscopy (SERS), a technique that identifies molecules through the unique signature of the scattered light detected when lasers are shined on them. If successful, this work could improve the detection of protein adulteration in milk and infant formula products. [Learn more](#). Our innovations in human presence detection and recognition software could be used to limit access to IT systems with sensitive information to only those who need it, protecting privacy in healthcare, education, and other areas. This technology may also enhance room and building occupancy detection for optimum lighting and temperature control, improving comfort, productivity, and environmental performance. [Learn more](#).

HP technology: Contributions to healthcare

Through our core businesses, HP is enabling improvements in healthcare. HP Managed Print Services (MPS) helps hospitals and health providers digitize and streamline workflows and document intensive processes, such as admissions and medical records, saving time and money and improving patient outcomes. Our integrated devices also ensure the [security](#) of sensitive patient information, and compliance with related regulations. Finally, MPS helps healthcare providers and hospitals conserve resources by optimizing printer fleet size and reducing paper use.

We have deep expertise in several technology areas which are urgently needed in the healthcare industry: microfluidics,⁷ measurement, commercial mobility, and computing. As the world's largest microfluidics company we have the know-how, scale, and leverage from our print business to apply that technology to healthcare purposes.



HP D300e Digital Dispenser.

For example, the HP D300e Digital Dispenser advances drug discovery, genomics, and proteomics research by using microfluidics for highly reliable dispensing of small molecules and biomolecules for sample testing, replacing less efficient serial sample dilution processes. This analog-to-digital shift accelerates drug discovery and time to market, while increasing efficiency, reducing errors, and decreasing health risks. The HP D300e Digital Dispenser reduces time per experiment fourfold and decreases waste related to sample materials by 90%, compared to serial dilution processes.

Moving forward, HP researchers are exploring new ways to use microfluidics to make biochemical testing and diagnosis faster, cheaper, and more easily conducted in the field. This has the potential to benefit industries including healthcare, defense, food safety, drug safety, and environmental protection, all of which rely on chemical analyses that are now typically undertaken on large, expensive machines in highly centralized locations.

Life cycle assessment

HP uses life cycle assessment (LCA) to quantify the environmental characteristics and impacts of our products and solutions. We also conduct product carbon footprints (PCF), a subset of LCA, to advance our work to reduce product greenhouse gas (GHG) emissions.

HP follows universal LCA standards set by ISO 14040/14044 and ISO 14025. For PCFs, we use International Electrotechnical Commission Technical Report 62921, a streamlined methodology for assessing the carbon footprint of computer and display products. We continually update our LCA and PCF tools to ensure that they provide the most current and accurate information possible.

For more information about our LCAs and PCFs, see [Desktop and enterprise printing](#), [Commercial and industrial graphics printing portfolio](#), and [Personal systems](#).

Communicating product safety and environmental performance information

All HP products undergo evaluations and testing to ensure that they meet all HP safety standards. To address legal requirements, HP provides country-of-origin information, required product content information, and information regarding safe use and end-of-service management for all of our products. [Product compliance declarations and certifications](#) are available online, along with [safety data sheets](#) for ink, toner, and batteries.

HP also shares information publicly on the environmental performance of our products so customers can make informed purchasing decisions and reduce their own environmental impacts. We communicate this through:

- **ECO declarations:** An industry standard for providing environmental information about products and product families. In 2016, HP provided ECO declarations for product groups representing 93% of revenue.
- **Eco-labels:** Third-party standards that recognize environmentally preferable products, including EPEAT®, ENERGY STAR®, China State Environmental Protection Administration (SEPA), Blue Angel, and TCO. Eco-label certification helps validate product environmental performance and is often critical to qualifying products for government procurement. A large percentage of our products meet these voluntary standards across our [personal systems](#) and [printing portfolios](#).
- **HP Carbon Footprint Calculator:** A web-based tool our customers can use to calculate and compare energy use, GHG emissions, and costs for more than 10,000 products (from HP and other manufacturers), including printers, PCs, and displays.

Materials

Getting the most value from the materials used in our products

In 2016, we used more than 900,000 tonnes of materials in our products and packaging.⁸ This is one of the main contributors to our environmental performance, including HP's [carbon and water footprints](#). To reduce these impacts and save money, we create

products that deliver more performance for customers with less material. We also work to drive responsible sourcing of the raw materials used to make our products, and we respect the health of the people who [make](#) and use them.

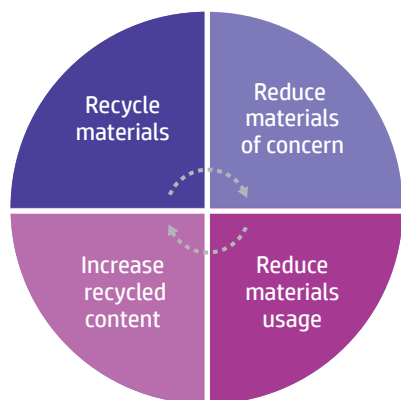
To drive progress toward a [circular economy](#), we are developing a healthy materials cycle—where plastics, metals, and other durable materials are used over and over without being “downcycled” into lower-grade uses, eventually becoming waste. We look for viable alternatives to substances of concern in our products and work to use more recycled content in each new generation of HP products. To extend product life and recover product materials, we offer a range of repair, reuse, and recycling programs globally. We also focus on responsible [paper](#) management and innovative [packaging](#) solutions.

In January 2017, we made publicly available the [HP materials and chemical management policy](#), which guides how we specify materials and chemicals for use in products, packaging, and manufacturing processes. The policy, which HP has followed for many years, applies to all HP employees and businesses worldwide, and extends to suppliers as well.

Materials management

Materials management is a central focus of our product sustainability efforts. We follow a four-pronged strategy to reduce related impacts across the value chain (see graphic).

HP materials management strategy



Reduce materials of concern

HP proactively identifies and evaluates the materials used in our products and throughout our supply chain. We prioritize materials for restriction by assessing published lists of substances of concern, customer preferences, new or upcoming legal requirements, and sound scientific analysis that reveals a potential impact to human health or the environment. Beyond our own operations, we work with and guide our suppliers on replacing substances of concern with environmentally preferable alternatives. We also focus on the responsible sourcing of materials, including [paper](#) and [metals](#).

We provide this information to customers, workers, communities, and other stakeholders so they can make informed decisions and reduce their own environmental impacts, subject to the need to protect confidential information for legitimate business needs and innovation. In January 2017, we published [HP Product Material Content Information](#), which contains material content information and breakdowns for typical HP personal systems and printer products. HP also makes available ECO declarations, an industry standard for providing product environmental information (including about substances of concern) for product groups representing 93% of revenue.

In 2016, HP participated in the [Chemical Footprint Project \(CFP\)](#), measuring and reporting the total amount of substances of concern in our products in order to establish a baseline and set quantitative goals for improvement. The CFP provides a standard benchmark for companies to evaluate progress toward reducing substances of concern.

Our current efforts to phase out substances of concern mainly focus on phthalates, brominated flame retardants (BFRs), and polyvinyl chloride (PVC).

All personal systems and inkjet printer products launched in 2016 have eliminated the phthalates bis(2-ethylhexyl) phthalate (DEHP), dibutyl phthalate (DBP), butyl benzyl phthalate (BBP), and diisobutyl phthalate (DIBP).⁹ In addition, 75% of personal systems product groups sold in 2016 were classified as low halogen,¹⁰ including all HP Elite Desktops,

All-in-Ones, notebooks, thin clients, and workstations. All HP disk drives, application-specific integrated circuits (ASICs), and memory modules are also classified as low halogen. HP has also reduced PVC usage by shortening power cords and we can provide PVC-free power cords for PCs and printers in many countries worldwide, depending on the product. These initiatives have reduced PVC usage by a total of more than 7,000 tonnes since 2011. HP will continue to advance these product improvements for our personal systems and printers.

HP works closely with suppliers on reducing potential substances of concern. We restrict substances of concern used in product and manufacturing processes through the [HP General Specification for the Environment \(GSE\)](#). Our monitoring and capability-building programs support suppliers in evaluating substances and ensuring proper protection for workers who manufacture and assemble our products. See [Supply chain responsibility](#) to learn more.

See a [timeline](#) of proactive materials restriction and substitution in products since the early 1990s.

HP seeks to use materials that reduce the risk of human health and environmental impacts without sacrificing performance or quality. When exploring alternatives, we follow the National Academies of Science publication "[A Framework to Guide Selection of Chemical Alternatives](#)" and incorporate the [GreenScreen® For Safer Chemicals](#) methodology. In 2016, we expanded our use of GreenScreen® to assess alternatives for chemicals used in our printing inks as well as our hardware products. We share preferred alternatives with our suppliers through procurement guidance documents.

Industry leadership

HP works with industry, governments, and nongovernmental organizations to achieve consistent standards and legislation as well as improved approaches to materials use in the IT sector. In 2016, activities included:

- Joining Green America's [Clean Electronics Production Network](#). The multi-stakeholder initiative is working to move the electronics industry toward zero exposure to hazardous substances in the manufacturing process. This work involves creating case studies for priority substances that include preferred alternatives, a pilot program for more comprehensive monitoring of worker exposure, and a common standard for reporting substances used. For more information see [Supply chain responsibility](#).
- Advancing sustainable materials use as a member of the [Business-NGO Working Group \(BizNGO\)](#). Working with BizNGO, HP has contributed to the development of the Chemical Footprint Project, as well as other initiatives.
- Co-leading a working group to revise the IEEE 1680.1 standard for the environmental assessment of personal computer products. The group focused on evaluating performance criteria aimed to reduce the environmental impact of electronic products, including the reduction or elimination of substances of concern.

Reduce materials usage

The less material we use in our products, the smaller our environmental footprint. Both the extraction of raw materials used in our personal systems and printers, and their manufacturing, contribute significantly to HP's greenhouse gas (GHG) emissions, so we work continually to reduce the volume of materials in new products.

Estimated materials use intensity for HP high-volume personal systems and printers, 2014–2016*

tonnes/\$ millions of net revenue

	Personal systems			Printers		
	2014	2015	2016	2014	2015	2016
Metal	4.5	3.6	3.0	14.7	15.4	17.6
Plastic	1.9	1.5	1.6	28.0	30.9	33.8
Wires/cables	0.8	0.6	0.6	0.4	0.4	0.5
PCAs	0.7	0.6	0.6	1.7	1.7	2.0
LCDs	1.4	1.2	1.8	0.0	0.0	0.0
Batteries	0.3	0.2	0.1	0.0	0.0	0.0
Total	9.4	7.7	7.7	45	48	54

* Personal systems data is based on individual products that are representative of the HP product portfolio for those years and does not include accessories sold separately. Printer values are based on individual product data. Estimates for printer volumes do not include graphic arts, industrial, web press printers, scanners, or ink or toner cartridges. Product data is based on fiscal year for 2016 and calendar year for 2014 and 2015. Net revenue data is based on HP's fiscal year. In some cases, segments do not add up to total due to rounding.

We measure progress using product materials use intensity, which is the volume of materials shipped per unit of net revenue. In 2016, materials use intensity remained the same for personal systems, compared to 2015. Our ongoing shift to smaller form factor devices (see [Personal systems](#)) was offset by the introduction of several significantly larger consumer and business displays and gaming products (hence the increase in LCDs). Materials use intensity in printers increased by 12% over the same period, because decreases in print revenue outpaced reductions in printer material volumes shipped.

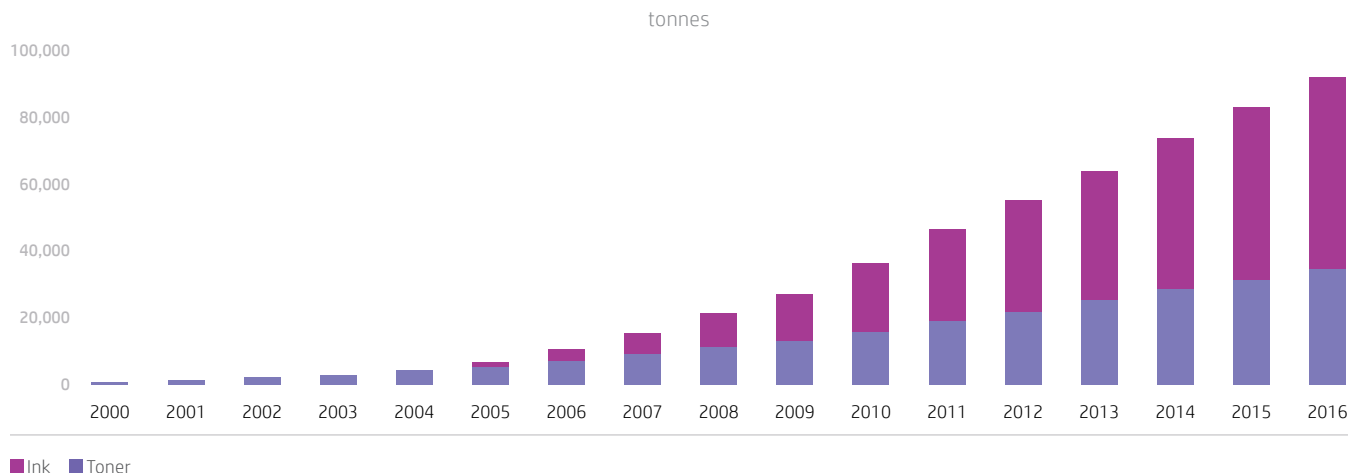
Recycle materials and increase recycled content

We are both a supplier and user of recovered materials, incorporating increasing amounts of recycled and recyclable content into new HP products. In doing so, we are accelerating the development of recovered materials markets around the world, which is essential to progress toward a circular economy. We offer a wide range of services related to product repair, reuse, and recycling. [Learn more.](#)

HP is an industry leader in closed loop recycling. We use a variety of plastics recycled from the HP Planet Partners program to manufacture new HP ink and toner cartridges.

Through 2016, we manufactured more than 3.4 billion HP ink and toner cartridges using more than 88,900 tonnes of recycled content material. This has kept 735 million cartridges, 70 million apparel hangers, and 3.7 billion postconsumer plastic bottles out of landfills, instead upcycling these materials for continued use. Today, more than 80% of our ink cartridges contain 45–70% recycled content, and 100% of HP toner cartridges contain 10–33% recycled content. In 2016, HP used 9,000 tonnes of recycled plastics in HP toner and ink cartridges.

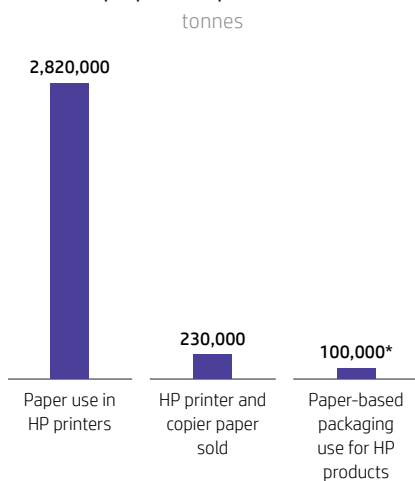
Recycled plastic used in HP toner and ink cartridges, cumulative



We also use recycled content in personal systems and printing products when feasible. In 2016:

- 47% of new commercial HP desktop products contained greater than 10% postconsumer recycled (PCR) plastic content, up from 33% in 2014.
- 70% of HP commercial displays contained more than 10% PCR plastics, and 26% contained more than 40% PCR plastics.
- We launched three inkjet printers that contained more than 5% PCR plastics. All models of our PageWide fleet now contain post-consumer recycled content plastic of more than 5%.

HP paper impacts, 2016



* This is significantly higher than the amount reported last year due to the addition of LaserJet supplies. Does not include packaging for commercial and industrial graphics printing solutions, or documentation for any products.

Paper

As the global market leader in digital printing, HP takes seriously its responsibility to reduce related environmental impacts, including paper use by our customers.

Use of paper represents as little as 13% of the GHG emissions of a home desktop printer and as much as 93% of the emissions of a PageWide Press across their respective life cycles. We help our customers print more sustainably by sourcing the paper we sell responsibly, facilitating more efficient paper use, and collaborating across the paper industry to encourage best practices. In our own operations, we apply these same principles through our recently updated [Environmentally Preferable Paper Policy](#). This defines how we buy, sell, and use paper and paper-based packaging, and states our commitment to source from suppliers that demonstrate responsible forestry practices.

Our zero deforestation commitment

Healthy, well-managed forests play a critical role in absorbing carbon dioxide and supporting biodiversity and local livelihoods. To help protect forests, in 2016 HP set a goal to achieve zero deforestation associated with HP brand paper and paper-based product packaging¹¹ by 2020.

We will achieve this goal by sourcing only certified and recycled fiber. To ensure full traceability, HP uses Forest Stewardship Council® (FSC®)-certified fiber where available. Programme for the Endorsement of Forest Certification (PEFC) certification or relevant national certification schemes that comply with our paper policy can be used in regions where they are recognized to not accept forest conversion, are endorsed by competent independent stakeholders, and ensure a reliable guarantee of responsible sources. We work with WWF's Global Forest & Trade Network (GFTN) and our suppliers to determine the source of virgin fiber and to increase the amount of certified fiber where possible. HP reports progress annually to the WWF GFTN and CDP forests program.

During 2016, we achieved this goal for HP brand paper, as noted in the table. We also surveyed our paper-based packaging suppliers to establish a baseline for the percentage of certified and recycled fiber. In 2017, we will set interim goals and work with our suppliers to increase these percentages.

Fiber sourcing, 2016

	FSC-certified (% of total)	All certified (% of total)	Recycled fiber (% of total)	Total (tonnes)
Paper products	Greater than 55%	100%*	**	230,000
Packaging***	8%	12%	26%	100,000****

* Less than 2% of paper by tonnage is not labeled as certified, but is made from certified fiber.

** Recycled fiber for paper products is included in the FSC-certified value.

*** Packaging is the box that comes with the product and all paper (including packaging and materials) inside the box.

**** Total tonnes for packaging does not include commercial and industrial graphics printing solutions, or documentation for any products.



During the year, HP was one of eight companies—and the only one in the information technology sector—named to CDP's inaugural "Forest A List."

In some geographies, sourcing certified or recycled fiber can be challenging. To improve regional availability and traceability of certified and sustainably sourced fiber, in 2016 we:

- Joined the [FSC Brand Awareness Campaign](#) to increase consumer awareness about forestry certification and help customers make more responsible choices. HP received an FSC Leadership Award in "Uncommon Partnership" for our efforts.
- Continued working with other companies as part of GFTN to promote responsible production and sourcing of forest products.
- Continued collaboration with WWF's China Sustainable Paper Alliance, which promotes the development of responsibly sourced paper products in the Chinese market.

Customer printing

The paper used by our customers in HP products represents about 17% of our carbon footprint and 26% of our water footprint. We help our customers print more responsibly by:

- Labeling all HP FSC-certified paper products to inform purchasing decisions.
- Defaulting print fleets to auto-duplex printing, including many LaserJet products released in 2015 and later.
- Designing products to optimize paper use, through duplexing and other features.
- Reducing paper waste by 25% or more using HP Managed Print Services.
- Improving the recyclability of paper by developing solutions for paper de-inking, which separates inks from paper fibers.

Packaging

Packaging innovation offers a prime opportunity to reduce our use of materials beyond our products, advancing our customers' sustainability performance and our own. We design packaging solutions that use less material, optimize shipping densities, and contain more recycled and recyclable content. This saves money and reduces GHG emissions, improving our footprint and that of our customers.

To drive ongoing progress, we require 100% of HP packaging materials to be recyclable.¹² In 2016, we committed to procuring all paper-based product packaging from certified and recycled sources by 2020. See [Paper](#) for more detail and progress.

We work to balance environmental impact with product protection, legal compliance, customer expectations, and cost. We follow six principles which are underpinned by [HP's General Specification for the Environment](#) and our [Environmentally Preferable Paper Policy](#).

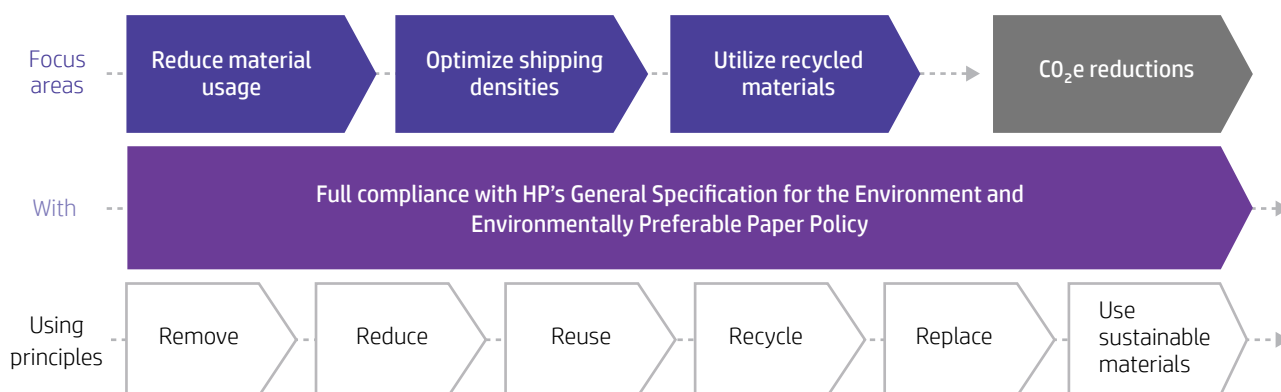
- Ensure that substances of concern are not used in HP packaging
- Reduce packaging material use in each new product
- Design packaging for reuse, where feasible
- Increase the use of recycled content
- Replace hard-to-recycle materials
- Ensure the use of sustainably sourced materials

In 2016, packaging innovations for printing and personal systems products by HP and its suppliers produced the following environmental and cost benefits:

- 3,400 tonnes of packaging materials reduced
- 14,700 tonnes of recycled content plastics and wood packaging used
- 8,600 tonnes of CO₂e emissions avoided
- \$12 million saved

HP environmental packaging strategy

Deliver our industry's most efficient and sustainable packaging designs



2016 highlights in packaging innovation*

Packaging innovation	Reduce material	Optimize shipping densities	Utilize recycled materials	Summary of benefits
Notebooks: Worked with our suppliers to manufacture a high-performance carton material instead of importing kraft liner (a paper-based material used in packaging).	x			Avoided 2,700 tonnes of CO ₂ e emissions Reduced packaging weight for HP Notebook products by 1,100 tonnes
Notebooks: Optimized notebook packaging size to complement new product designs, such as integrated batteries.	x	x		Avoided 2,200 tonnes of CO ₂ e emissions Improved shipping density by 15%
Desktops: Used a lightweight foam pallet and reconfigured packaging and pallet configuration for ocean and rail shipments	x	x	x	Avoided 360 tonnes of CO ₂ e emissions
HP Inkjet: Redesigned packaging cushion with lower density material to reduce weight	x		x	Avoided 350 tonnes of CO ₂ e emissions Reduced total packaging weight by up to 18% for certain products
HP LaserJet: Reduced the package size for the HP LaserJet Pro M477 printer by 33%**	x	x		Avoided 530 tonnes of CO ₂ e emissions Eliminated the need for the equivalent of 370 shipping containers
HP LaserJet supplies: Changed from air bag cushion system to readily recycled thermoformed cushion, which contains 90% recycled content	x		x	Eliminates demand for 1,900 tonnes for virgin plastic over the life of the program

* Avoidance, reductions, and savings data is based on comparisons of current and prior generations of packaging, either for the same or comparable products. Savings and reductions may relate to the fabrication phase of the packaging life cycle (including materials extraction and processing) as well as product transportation. All savings are for fiscal year 2016 (November 2015–October 2016) unless otherwise indicated. Some estimates of benefits were calculated using production forecast data.

** Launched in late 2015.

Ongoing programs

Several ongoing initiatives continued to deliver environmental and financial savings.

- **Recycled pallets:** Continued collaboration with North American suppliers on a recycled pallet program through which we have avoided the use of 691,000 new pallets, saving 38.2 million board feet of lumber since 2012.
- **Non-heat-treated pallets:** Sourced more than 493,000 pallets made of domestic, non-heat-treated timber for North American shipments, avoiding 439 tonnes of CO₂e emissions in 2016. Pallets sourced internationally are often heat treated to reduce the risk of transferring insect species between locations.

Vendor and industry collaboration

HP works with vendors to increase the amount of packaging made of recycled and sustainably harvested fiber that we purchase. We also provide relevant suppliers with detailed guidelines on environmentally responsible packaging design. For information about how we source paper-based products and packaging, see [Paper](#).

To support sustainable packaging across our industry, we participate in the IEEE 1680.1 Committee (in support of EPEAT registration for PCs). This forum establishes product and packaging-related environmental requirements for the selection and procurement of computing products.

Energy efficiency

Reducing our footprint, and that of our customers



ENERGY STAR® Excellence Award – Product Design

In 2016, HP was recognized by the U.S. Environmental Protection Agency for driving significant advancements in product efficiency

By engineering more energy-efficient products, we improve environmental performance while helping customers do meaningful work, accomplish their goals, and save money. We continue to make strong progress in this area. Since 2010, the energy consumption of our personal systems products dropped by 34%,¹³ on average. During that timeframe, we have reduced energy consumption of our HP LaserJet portfolio by 56%, on average,¹⁴ and the energy consumption of our HP inkjet portfolio by 20%, on average.¹⁵

Key advances during 2016 included:

- **Smaller desktop PCs:** We continue to shift our personal systems portfolio toward smaller systems that are more efficient without compromising performance, such as the [HP Elite Slice Business PC](#) and [HP EliteDesk 800 mini models](#). See [Personal systems](#).
- **Advanced printer technologies:** HP PageWide technology uses substantially less energy by utilizing a stationary printhead and moving only the paper, while printing at faster speeds than standard inkjet printers, which move both paper and printhead. See [Desktop and enterprise printing](#).
- **Digital web presses:** On-demand printing with our digital web presses enables users to print what they need, when they need it, lowering total energy use compared with analog systems. See [Commercial and industrial graphics printing solutions](#).
- **Product-as-a-service models:** Service models optimize workflows, helping customers better manage energy usage. [HP Managed Print Services](#), for example, can help customers reduce their printing-related energy use by up to 40%.

The energy consumed by our products during use is one of the largest contributors to our carbon and water footprints, so we've established multiple metrics to assess progress.

- Product GHG emissions intensity describes the performance of our portfolio, taking into account changes to product mix and business growth. This metric measures GHG emissions during product lifetime use, per unit for personal systems and per printed page for printers. These values are then weighted by contribution of personal systems and printing products to overall revenue.
- Our product use carbon and water footprints measure overall environmental impacts related to customer use of HP products in absolute terms, taking into account shipped volumes. For personal systems, this includes the GHG emissions and water use associated with energy consumption throughout the lifetime use of a product. For printers, it includes the GHG emissions and water use associated with consumption of energy as well as paper and supplies during lifetime use of the product.

Product GHG emissions intensity

In 2016, we set a goal to reduce the GHG emissions intensity of our product portfolio by 25% by 2020, compared to 2010.¹⁶ Through the end of the year, we achieved a 19% decrease, building on a 17% reduction through 2015. An ongoing shift in our personal systems product mix to smaller, more energy-efficient devices contributed to an ongoing decrease in the energy consumption of those products. This was complemented by adding commercial and industrial graphics printing solutions to the calculations, since those products have very low GHG emissions intensity per printed page. JetIntelligence

and other recent energy efficiency features in our printer portfolio also had a beneficial impact. These positive factors were counteracted to an extent by a shift in sales to higher end (and more feature and energy intensive) HP LaserJet products.

Product use carbon and water footprints

In 2016, 53% of our overall carbon footprint resulted from the energy, paper, and ink and toner cartridges that customers consume during product use, of which 62% was due to electricity consumption. Absolute greenhouse gas (GHG) emissions from personal systems product use fell by 10% compared to 2015, reflecting a continued shift to smaller and less energy-intensive desktops, notebooks, and tablets.

In 2016, we added commercial and industrial graphics printing solutions, which use large amounts of paper, to our product use footprint calculations. As a result, reported GHG emissions related to printing rose by 11% compared to 2015. Not including those products, printing-related GHG emissions increased by 1% over that period, due to a shift toward more energy- and feature-intensive products and more accurate assumptions about the use of duplexing (a smaller percentage than previously assumed). Overall GHG emissions from product use across our portfolio increased by 1% year over year. Without the addition of commercial and industrial graphics printing solutions, there would have been a 4% decrease overall.

GHG emissions from product use*

tonnes CO₂e

	2015	2016
Personal systems	9,100,000	8,200,000
Desktop and enterprise printers (energy)	3,600,000	3,600,000
Commercial and industrial graphics printing solutions (energy)	Not available	250,000
Printing consumables for desktop and enterprise printers (paper and ink/toner cartridges)	6,400,000	6,500,000
Printing consumables for commercial and industrial graphics printing solutions (paper and other supplies)	Not available	790,000
Total	19,100,000	19,300,000

* Segments for 2016 do not add up to total due to rounding.

Product use represented 75% of our water footprint, due to the considerable amounts of cooling water required during electricity generation as well as water use related to paper production. The 8% decrease in personal systems-related consumption in 2016 compared to 2015 is due to corresponding reductions in energy use.

The inclusion in 2016 of commercial and industrial graphics printing solutions to our footprint led to a 12% increase in overall printing-related water consumption compared to the prior year. Not including those products, printing-related consumption decreased by 1%, partly due to an updated conversion factor published by the International Energy Agency in 2016 which had a favorable effect. Overall water consumption related to product use increased by 2%, and would have decreased by 4% excluding the addition of commercial and industrial graphics printing solutions.

Water consumption related to product use*

cubic meters

Product group	2015	2016
Personal systems	76,400,000	70,000,000
Desktop and enterprise printers (energy)	30,500,000	31,100,000
Commercial and industrial graphics printing solutions (energy)	Not available	2,200,000
Printing consumables for desktop and enterprise printers (paper)	46,800,000	45,800,000
Printing consumables for commercial and industrial graphics printing solutions (paper)	Not available	7,200,000
Total	153,700,000	156,300,000

* Total water consumption related to product use differs by less than 1% from the values reported on [pages 23 and 70](#), due to rounding.

Innovation in 2016

Personal systems

The most innovative portfolio in our company's history

HP is a global leader in personal systems. We continue to deliver breakthrough productivity solutions by listening to and responding to the needs of our customers, both commercial and home users.

Personal systems accounted for 42% of HP's product use carbon footprint in 2016. We design our products to be increasingly [energy efficient](#), durable, and easy to repair. Our designers and engineers strive to incorporate less material and more recycled content into each new generation. Beyond design innovation, we now offer business customers subscription-based services that enable them to upgrade to more energy-efficient hardware and software every two to three years. We also extend the life of our personal systems through refurbishment programs, keeping products, components, and materials in use for longer. Our personal systems portfolio includes more ENERGY STAR certifications and EPEAT and EPEAT Gold registrations than any other manufacturer.



HP Elite Slice

HP Z2 Mini G3 Workstation

HP Z1 G3 AiO Workstation

HP Spectre 13

HP Elite x3

Sustainable product design

A focus on creative product design and materials innovation, as well as making our products more durable and easy to repair, improves the environmental performance of our personal systems.



Three form factors of the EliteDesk 800 G1 series: the Tower, USDT, and SFF.

In 2016, we continued to shift our portfolio toward more materials- and energy-efficient products that drive better value for customers. The ongoing transition to smaller desktop products, such as our HP EliteDesk 800 mini models, has significantly reduced materials use and customer energy needs, and related GHG emissions, compared with the older ultra-slim desktop towers (USDT). The HP Elite Slice business PC, which is in turn up to 70% lighter than the EliteDesk 800 G2 Small Form Factor (SFF) PC, pushes this trend another big step forward. In 2016, we continued to ship more desktop mini models compared to USDTs, reducing plastic shipped per unit by more than 26%, and metal by over 16% compared to the prior year.

HP notebooks, a growing business segment, are more energy efficient than desktop computers, and we continue to reduce material use per unit produced. Notebooks shipped in 2016 contained on average 10% less metal and 4% less overall material per unit than in calendar year 2015. See [details](#) about the materials intensity of our high-volume personal systems.

To drive progress toward a closed loop circular economy, we increasingly use post-consumer recycled (PCR) plastic content in our products. In 2016, 47% of new commercial desktop products contained greater than 10% PCR plastic content, compared to 33% in 2014. In addition, 37% of commercial displays are made with at least 40% PCR plastic content.



HP Spectre 13, the world's thinnest laptop.

Since 2010, the energy consumption of our personal systems products dropped by 34%,¹⁷ on average. New products are advancing continuous improvement, such as the HP Elite Slice, which is up to 50% more energy efficient than the EliteDesk 800 G2 Small Form Factor PC. The HP Z2 Mini G3 Workstation is up to 52% more energy efficient than the EliteDesk 800 G2 Small Form Factor PC and up to 72% more energy efficient than the HP Z240 Small Form Factor Workstation. Demonstrating HP's commitment to energy efficiency, every commercial desktop and all-in-one with an internal power supply launched since the summer of 2016 is at least 80 PLUS BRONZE certified.

Product reliability and repairability is a critical aspect of sustainable design. To deliver the highest possible quality, all HP Elite and Pro notebooks, Elite and Pro 2-in-1 laptops, mobile workstations, and Elite desktop PCs undergo multiple tests and are designed to pass the [MIL-STD-810G standard](#), which includes harsh drops and exposure to high temperatures. To promote serviceability and longevity, we provide free service manuals for most products and a comprehensive range of service options and product warranties. The HP Elite x2 1012 G1 Tablet, HP Z1 Workstation, and HP Z820 Workstation have all received perfect [iFixit](#) scores for repairability. The HP Elite X3 is IP67 rated for durability, meaning it is completely dust resistant and maintains functionality after being submerged in water for up to 30 minutes.



HP Elite x3.

HP Elite x3: Delivering performance and materials efficiency

In 2016, we launched the transformative HP Elite x3. The 3-in-1 device delivers the functionality, versatility, and power of a desktop PC, tablet, and mobile device, rolled up into one fully integrated system. This new category of product is tailored to meet the dynamic needs and diverse work styles of our ever-evolving business customers. With cross-platform capabilities and seamless connectivity, the HP Elite x3 eliminates the need to own or carry several devices, and uses up to 56% less material.

We help our customers extend the life of HP Elite x3 products through standard and enhanced warranty support, damage repair, and device replacement services. An enhanced device diagnostics process identifies and replaces failed components and refurbishes products to enable continued use. [Learn more](#) about how we help customers keep our products lasting longer.

Product carbon footprints

Sustainable innovation requires a comprehensive grasp of product environmental performance. HP uses product carbon footprints (PCF), a subset of life cycle assessment, to understand and reduce the climate impact of our personal systems products. We conduct PCFs on all HP commercial desktops, notebooks, tablets, workstations, thin clients, all-in-one computers, and displays. These analyses help us prioritize issues to address, such as energy consumption during product use and the environmental impact of manufacturing activities. In 2016, products covered by PCF analysis comprised 99% of HP's personal systems product revenue.

HP works closely with peer companies, suppliers, and academia on consistent PCF methodologies. We are part of a multi-stakeholder effort led by the Massachusetts Institute of Technology's Materials Systems Laboratory that established the Product Attribute to Impact Algorithm (PAIA)—a universal set of carbon footprint methodologies and tools for personal systems. In 2016, we added a PAIA tool for our thin client products. We have now developed tools that cover all personal system products.¹⁸ HP also leads a group that developed eco-label criteria to reduce personal systems-related GHG emissions, as part of the Institute of Electrical and Electronics Engineers (IEEE) 1680.1 standard for computers and displays.

Sustainable design and certification

In our efforts to help customers make informed purchasing decisions, we communicate environmental performance of our personal systems products through eco-label declarations. Our personal systems portfolio meets requirements for a broad range of eco-label certifications around the world (see table).

More HP personal systems products are independently certified through ENERGY STAR and registered to EPEAT than any other major manufacturer. In 2016, 97 of our business display models were certified to the latest ENERGY STAR 7.0 standard before the required implementation date of July 1 of that year, and 4 models qualified for the ENERGY STAR Most Efficient products list. All HP EliteDesk and HP EliteBook products exceed ENERGY STAR 6.1 performance requirements by at least 10% and 30%, respectively.

Eco-labels across our personal systems portfolio

% models, for products shipped in 2016*

EPEAT® identifies high-performance, environmentally preferable products				ENERGY STAR® 7.0 or 6.1 certified	China SEPA	TCO
EPEAT® (all categories)	EPEAT® Gold registered	EPEAT® Silver registered	EPEAT® Bronze registered	recognizes products with superior energy efficiency	recognizes energy saving and environmentally preferable models	recognizes various ergonomic and environmental features related to visual displays
89%	50%	39%	0%	91%	72%	43%

*EPEAT® data is for models worldwide, based on U.S. registration. ENERGY STAR® data is worldwide. China SEPA data applies only to products registered in China. TCO data is for displays and all-in-ones registered in Europe. All data is for models shipped anytime during fiscal year 2016.

HP collaborates in developing, updating, contributing to, and advocating for standards that promote sustainable and energy-efficient technology. In 2016, this included leading a working group to refresh the EPEAT standards for PCs. HP also works closely with TCO to refresh product standards.

Product-as-a-service

Our expanding product-as-a-service offerings for personal systems provide our customers with the latest HP technology while reducing capital costs. These solutions can enhance customer productivity while gaining greater value from the materials used to manufacture our products and accelerating the transition to a circular economy.

[HP Device as a Service \(DaaS\)](#) and [HP Subscription Services](#) are reinventing workplace solutions for our customers. These offerings each provide a complete solution that combines a full portfolio of personal systems products and IT and life cycle management services, offered on a per-seat, per-month basis.

Business customers are able to upgrade their products every two to three years, to the latest and most efficient models, while avoiding the up-front costs of purchasing. When customers are finished with their products, HP manages all hardware and software migration and decommissioning, which includes refurbishing or responsibly disposing of old products. Historically, approximately 90% of returned products have retained value and are reused.

[HP Proactive Intelligence](#) provides predictive support to customers, anticipating potential issues before they occur to keep businesses running without interruption. [HP Touchpoint Manager](#), which comes installed in our entire Elite portfolio, is a cloud-based IT management system that enables customers to track and troubleshoot device security and health issues, keeping their devices functional and productive.

Desktop and enterprise printing

The global leader in environmentally responsible printing solutions

HP is a leader in eco-label-certified desktop and enterprise printing products, with devices from all categories meeting the highest standards available. We design products that help our customers, from home users to global organizations, do more while using less [energy](#) and [materials](#). We also design printer accessories and supplies to use less raw material and incorporate increasing amounts of recycled content. In 2016, desktop and enterprise printing accounted for 52% of HP's product use carbon footprint. Continuous innovation

across our printing portfolio ensures that each new generation of printers uses materials effectively and is more energy efficient than the last. This, combined with our product-as-a-service offerings, supports our transition to a circular economy, an important driver of HP's long-term business success.



HP LaserJet
Enterprise M506dn

HP PageWide
Enterprise Color
Flow MFP 586z

HP OfficeJet Pro
7740 Wide Format
All-in-One

HP LaserJet
MFP M436n

HP LaserJet
Managed MFP
82560dn

New A3 Multifunction printers (MFP): Reinventing copying for our customers—and the planet

In 2017, HP's next generation of energy-efficient multifunction printers (MFPs) will bring transformative innovation to our desktop and enterprise printing offerings. The A3 portfolio (including the two printers pictured above at right) will include 52 new HP PageWide and LaserJet products, each designed to be modular, customizable, highly serviceable, secure, and capable of delivering greater value and stronger environmental performance for customers.

HP's A3 portfolio delivers a breakthrough ecosystem of devices and tools that will lower product service costs and enhance customer experience. Modular design improves serviceability and enables less waste with common parts, components, and paper handling accessories, while simplifying manufacturing. Most components can be accessed without a lengthy disassembly process. Based on their unique needs, customers can configure their own device, and we make it easier for them to replace specific components without needing to return the entire device. In addition, minimizing the number of unique configurations and accessories helps to reduce manufacturing inventories and associated waste.

A3 printers are designed to be reliable and durable. They use high-capacity HP ink and toner supplies with an increased page yield that extends the life of consumables and decreases production waste. HP LaserJet A3 printers use high-capacity toner supplies with an increased page yield and a two-part cartridge design that extends the life of consumables and decreases production waste. These printers are optimized by HP Smart Device Services, a cloud-based technology that remotely monitors the printer's health. This maximizes uptime and reduces trips required to maintain, service, and repair systems, as well as the corresponding transportation footprint.

Read more about our new [A3 MFP printer portfolio](#).

To continually improve our products' environmental performance, we have to know them inside and out. HP uses life cycle assessment (LCA) to quantify the environmental impacts of our printing products and solutions. These assessments help us identify the life cycle phases, processes, components, and materials with the largest environmental impacts, and explore and prioritize opportunities for improvement.

In 2016, HP completed or updated 25 LCAs, including 3 HP LaserJet printers, 18 HP inkjet products, and 4 scanners. 100% of the company's desktop and enterprise printing portfolio has been analyzed using LCA, taking into account prior assessments.

Sustainable design and certification

HP communicates product environmental performance to customers through eco-label declarations, enabling them to make informed decisions that reduce environmental impact. Most of our printing products meet the requirements for national, regional, and global [eco-labels](#) including EPEAT®, ENERGY STAR®, China SEPA, and Blue Angel.

Eco-labels across our printing portfolio

% models, for products shipped in 2016*

EPEAT® identifies high-performance, environmentally preferable products				ENERGY STAR® 2.0 certified	China SEPA	Blue Angel
EPEAT® (all categories)	EPEAT® Gold registered	EPEAT® Silver registered	EPEAT® Bronze registered	recognizes products with superior energy efficiency	recognizes energy saving and environmentally preferable models	recognizes criteria in product design, energy consumption, chemical emissions, noise, recyclable design, and take- back programs displays
68%	1%	45%	22%	95%	94%	41%

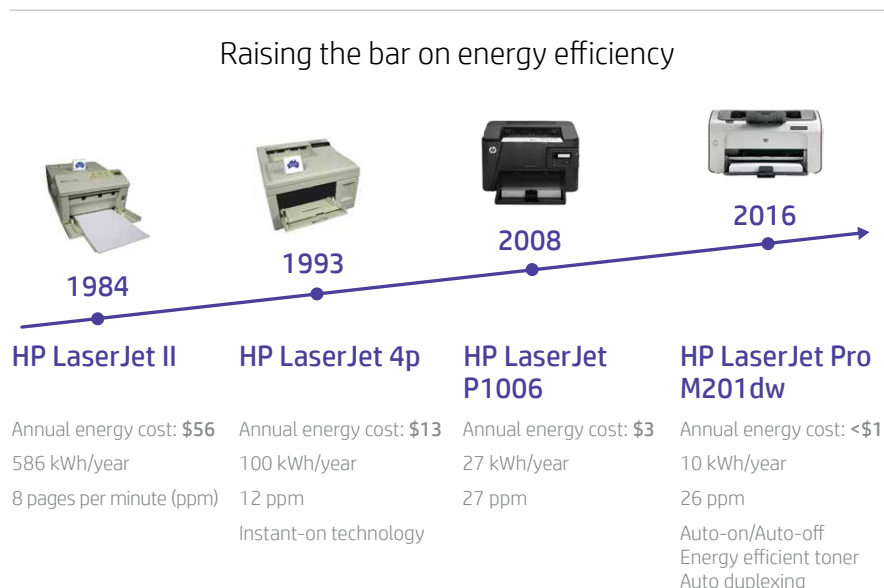
*EPEAT® data is for models registered in the United States. ENERGY STAR® data is worldwide. China SEPA data applies only to products registered in China. Blue Angel applies only to products registered in Germany. All data is for models shipped anytime during fiscal year 2016.

The following examples highlight our progress toward continually improving the sustainability of our desktop and enterprise printing products:

- **HP PageWide Pro and HP PageWide Enterprise business printers:** By avoiding the use of a fuser element in the printing process, HP PageWide technology consumes significantly less energy than conventional laser printing technology. The stationary printhead delivers four colors of ink onto a moving page, a process which requires much less energy than traditional technologies. Every model has default duplex printing and meets strict particle release criteria to ensure indoor air quality and approval for cleanroom use.¹⁹ According to a third-party analysis, these printers reduce energy consumption by up to 71%, generate up to 95%²⁰ less supplies and packaging waste than comparable laser printers, and can reduce the carbon footprint of printing by up to 80%.²¹ In 2016, HP launched the PageWide Enterprise Color Flow MFP 586z, registered EPEAT Gold in the United States. This model has 5% post-consumer recycled content and features packaging that is 90% recyclable.²² Overall, 100% of HP's PageWide fleet contains at least 4% post-consumer recycled content plastic.
- **Inkjet portfolio:** Since 2010, HP has reduced energy consumption of our HP inkjet portfolio by 20% on average,²³ while adding new features such as Wi-Fi. Given the dramatic improvements over the last decade and the very low level of energy use for these products currently, we anticipate that opportunities for further innovation

in energy efficiency may be limited. In 2016, HP launched three inkjet printers—HP OfficeJet Pro 7740 Wide Format All-in-One Printer, HP OfficeJet 200 Mobile Printer, and HP OfficeJet 250 Mobile All-in-One Printer—with more than 5% post-consumer recycled content plastic.

- HP LaserJet portfolio:** Since 2010, HP has reduced energy consumption of our HP LaserJet portfolio by 56%, on average.²⁴ Nearly all EPEAT Gold registered LaserJet products feature packaging that is at least 90% recyclable.²⁵ Due largely to HP JetIntelligence toner cartridge technology, the latest models, including the HP LaserJet Enterprise M506dn, consume up to 42%²⁶ less energy during use than the prior generation. Furthermore, HP toner cartridges with HP JetIntelligence contribute up to 55%²⁷ less CO₂ emissions than the products they replace.



Printing supplies

We manufacture ink and toner cartridges and print media to use materials effectively, to be highly recyclable, and to perform in other areas such as contributions to indoor air quality (IAQ).²⁸ These efforts improve our footprint and that of our customers while demonstrating leadership across the industry. Highlights include our [closed loop ink cartridge recycling program](#) and progress toward our [zero deforestation goal](#) related to HP paper and packaging.

Product-as-a-service

Our product-as-a-service printing solutions provide customers with the up-to-date technology they need, when they need it. This model, a growing area of business for HP, also helps keep products, components, and materials operating at a high level for as long as possible, furthering our transition to a circular economy.

HP Managed Print Services (MPS) helps clients of all sizes optimize, manage, and improve their printer fleets and digital workflows. Our experts provide environmental assessments

and consulting, tailored to an organization's printing practices and preferences. By combining hardware, supplies, software, and services, we help clients reduce costs and enhance security and workflow management while improving resource use and accelerating progress toward a circular economy. Benefits to our MPS customers include:

- Reductions in printing-related energy usage of up to 40%
- Decreases in imaging and printing costs of up to 30%
- Reductions in paper waste of 25% or more

In 2016, 57% of HP MPS office print technology that ended its first service life was remarketed to a second customer. Preparation for remarketing includes auditing, testing, and secure data cleansing. Equipment deemed no longer functional is recycled in a responsible manner in accordance with HP policies.

Read more about [HP Managed Print Services](#).

Principal Financial Services: building on success with HP MPS

When Principal Financial Services first implemented HP MPS in 2008, the global financial services firm was looking to cut costs, consolidate and optimize its printing fleet, reduce paper usage, save space, and enhance performance. With HP's help, the company has reduced the number of single-function printers by 68%, cut print volume in half, and dramatically changed user behavior. Duplex printing, for example, has increased from 16% to 32%, saving one million pieces of paper in the most recent year alone.

Principal Financial Services continues its work with HP to boost document security, further reduce waste, simplify scanning, and help deliver a new office "blueprint" for the future. The company has deployed HP Access Control and HP Capture and Route to deliver greater office printer flexibility, increase security for confidential documents, and reduce year-over-year printing by more than four million pages.

Read more about HP MPS at [Principal Financial Services](#) and how [other customers](#) are benefiting from this service offering.

HP Instant Ink helps home users and microbusinesses in six countries around the world remain productive by ensuring that they never run out of ink.²⁹ The service anticipates when ink is running low and sends more straight to our customers' doors. Our customers also save money—up to 50% on ink,³⁰ while decreasing their environmental footprint. With prepaid envelopes that make cartridge return and recycling easy, Instant Ink customers return cartridges at a significantly higher rate than those who purchase ink in conventional ways. Additionally, Instant Ink cartridges have a higher capacity and use less packaging materials per page printed than conventional models, which helps reduce materials consumption by 57% on average per printed page. These efforts help reduce the carbon footprint of ink purchase and disposal by 84%, decrease energy use by 86%, and lower water usage by 89%.³¹

Read about our [service-based](#) personal systems offerings.

Commercial and industrial graphics printing solutions

Driving the digital printing revolution



View a video about the [HP PageWide Web Press T400 series](#).

The shift in the printing and publishing industries from analog to digital production offers tremendous benefits for customers and the environment. From commercial printing for brochures and magazines to rigid and flexible packaging, HP is leading this cross-sectoral transformation. Through efficient, on-demand, highly upgradeable web presses, we help customers personalize products and messages while reducing waste, cost, and environmental impact. HP provides service-based offerings and comprehensive repair, reuse, recycling, and end-of-service solutions that accelerate our transition toward the circular economy.



[HP Latex 570](#)
[HP DesignJet T1100](#)
[HP PageWide C500](#)
[HP Indigo 30000](#)
[HP PageWideXL](#)

HP's digital press solutions

Shifting to digital solutions in the printing, publishing, packaging, and labeling sectors, and in new markets such as food packaging, increases business value for our customers. Products made with HP's digital presses benefit from greater customization, production runs tailored to seasonal demand, and a shorter delivery time to market.

Digital printing also delivers environmental and cost benefits by eliminating steps involved in analog printing that produce waste, such as plate production and make-ready. The technology also enables customers to better match supply and demand, reducing costly overruns and saving paper. In addition, digital files can be sent to presses closer to the end user, reducing transportation costs and environmental impacts.

We offer upgradeability, refurbishment, reuse, and recycling solutions to further extend the already very long useful life of presses and provide [responsible disposal options](#) when needed.

Indigo digital presses enable efficient on-demand printing for various food and pharmaceutical applications including labels and shrink sleeves (such as plastic sleeve labels for soda bottles), flexible packaging, and folding cartons, as well as commercial marketing and publishing needs. Designed with sustainability in mind, these presses lower customers' costs and environmental impacts compared with analog presses, especially for short production runs. A 2016 HP-funded third-party LCA found that GHG emissions associated with printing a flexible package on the HP Indigo 20000 press equaled 20% of the emissions associated with the rotogravure analog print process, and total water consumption decreased by about half compared to the CI Flexo analog print process.³² HP Indigo also offsets GHG emissions from the press manufacturing process.³³

HP designs press parts and supplies for reuse and recycling, and runs free take-back programs for presses, parts, and supplies. In 2016, we recovered more than 90,000 Indigo binary ink developers (BIDs) for refurbishment and resale, representing about two-thirds of total BIDs sold. Through our refurbishment program, we also received numerous presses for remanufacture or parts recycling.

HP Indigo's product-as-a-service printing solution provides customers with the up-to-date technology they need, when they need it. The click-charge business model includes consumables used during printing in a cost-per-print fee. This provides us an incentive to deliver consumables in the most resource-efficient way possible, reducing waste and supporting the circular economy. Through this model, HP Indigo helps customers efficiently manage their use of supplies and provides long-term support for high-value presses. Indigo's regenerated imaging oil (RIO) system reduces maintenance and enables customers to use what was previously considered to be waste oil from the press, reducing waste oil by 20–50% on average. HP Indigo Printcare provides troubleshooting and diagnostics tools to maintain quality, productivity, and profitability and to help keep presses running as long as possible.

HP PageWide web presses provide digital on-demand printing solutions for publications, direct mail, and high-volume commercial applications (such as brochures and marketing collateral), as well as paper-based packaging for a wide range of sectors such as food and pharmaceuticals. By printing cost-effective, short-run jobs the presses minimize raw materials and energy use, and eliminate waste from setup and changeover processes. The modular web presses allow customers to upgrade as their needs evolve, rather than buy new models. For example, our latest inkjet printhead technology [High Definition Nozzle Architecture \(HDNA\)](#) works with most older web presses. Printheads for HP PageWide web presses can also be returned and recycled at no cost through HP Planet Partners.

In 2016, we expanded our portfolio, unveiling the HP PageWide C500 Press, a flexible post-corrugated-print solution for corrugated packaging and displays that uses a new version of HP's water-based pigment inks. We also launched the HP PageWide T1100S Web Press and HP PageWide T400S Web Press for preprint corrugated packaging. These products use HP PageWide technology—with water-based HP inks and pretreatment fluids—to print different jobs, with varying image sizes and run lengths, simultaneously, whether printing on a web or corrugated boxes.

Water-based inks for a lighter footprint

HP designs printing press supplies with environmental criteria and customer and end-user health and safety in mind. Innovations such as HP PageWide technology designed for the C500 Press and T1100S and T400S Web—with water-based HP pigment inks and pretreatment fluids—help customers comply with U.S. and European food packaging safety regulations and guidelines. These inks and fluids are non-flammable and non-combustible,³⁴ contain no intentionally added hazardous air pollutants,³⁵ and produce low levels of volatile organic compound emissions.³⁶ HP PageWide Web Press Inks have achieved UL ECOLOGO® Sustainable Product Certification, meeting a range of human health and environmental criteria. The HP PageWide Web Press T1100S and HP PageWide C500 Press expanded our use of water-based inks to preprint packaging.

HP Latex water-based ink technology, used in signage and decoration applications, employs innovative binder and ink formulation for leading health and safety performance, providing high potential for application across sectors. These inks are UL ECOLOGO® and UL GREENGUARD GOLD Certified, and meet AgBB criteria.³⁷ Low-emitting prints with HP Latex inks can be used in indoor spaces for which solvent-based inks cannot, such as healthcare settings, hospitality, or retail. All HP DesignJet, HP PageWide XL, and HP Latex large-format printers use water-based inks. [Learn more](#) about the environmental certifications and eco-labels for HP Latex Printing Technology.

Customer health and safety

HP's long leadership in sustainability and transparency regarding the environmental, health, and safety (EHS) performance of our graphics printing products and supplies builds trust with customers and opens up new market opportunities. This is relevant to print operators, since our water-based inks offer a healthier work environment,³⁸ and increasingly to end customers, especially as we expand further into decoration and food packaging applications.

We demonstrate our ongoing commitment to customers through transparent communications about product performance. Our presses and inks meet a range of eco-labels, including EPEAT, UL ECOLOGO®, Intertek Green Leaf Mark, and GREENGUARD GOLD, depending on the product. HP provides customers with the information necessary to assess their own operations, including press emissions (both indoor and outdoor) and food packaging requirements. We work closely with customers' regulatory teams, and where necessary provide a Statement of Composition to enable downstream users to perform assessments on the final package.

HP engages with brands and industry associations regarding regulatory trends and is a member of strategic industry associations supporting best practice for digital technologies. For example, we belong to the [European Printing Ink Association \(EuPIA\)](#), which provides guidance to industry on the safe manufacturing, use, and handling of printing inks, including for food packaging.

3D printing

Poised to disrupt manufacturing and enable the circular economy



Watch a video [Introducing the HP Jet Fusion 3D printing solution](#).

From the automotive, healthcare, and aerospace sectors to consumer goods and advanced manufacturing, 3D printing (also known as additive manufacturing) is poised to revolutionize industry and commerce. 3D printing is ushering in what is being called the “fourth industrial revolution,” whereby mass digitization will reinvent how we design, manufacture, distribute, and maintain products. HP is at the heart of this transformation. We launched our first commercial 3D printing solution in 2016, and are working to deliver the speed, quality, reliability, and cost improvements necessary for scalable production and widespread adoption.

This disruptive technology, which has the potential to enable local, faster, and more efficient manufacturing and prototyping than traditional processes, is a critical enabler of the circular economy. Key sustainability benefits include:

- **Reduced environmental impact:** 3D printing has the potential to reduce waste in manufacturing and distribution processes by enabling perfect matching of supply and demand and improving the cost-effectiveness of shorter production runs (analogous to enhancements HP has achieved by digitizing commercial print production and enabling the analog-to-digital shift). Streamlined prototyping processes also support less wasteful and more rapid iteration in product design and development. Additionally, 3D printing will significantly reduce the amount of material needed to make some finished parts by realizing complex shapes or redesigning complex assemblies into a single part, in some cases using a single material. These features can save money, decrease energy and resource consumption, lower greenhouse gas emissions, and simplify materials capture at end of life.
- **Reinvention of traditional supply chains:** 3D printing has the ability to transform entire industry value chains—from design and manufacturing to distribution and service. With digital inventories and on-demand production, companies can print what they need, when and where they need it, reducing the need for inventories and

transportation and packaging. 3D printing produces replacement parts locally and on-demand, which can extend the useful life of products for customers through just-in-time, localized delivery models. For example, in a traditional supply chain, a replacement part for an automobile might need to be shipped cross-country, or even overseas, to fulfill an order or repair, taking several days. With 3D printing, a customer will be able to pick up a replacement part locally, avoiding storage, excess transportation, and waiting.

- **Transformation of economies and societies:** 3D printing can reduce barriers to market entry, expanding opportunities for emerging economies and small businesses, and accelerating adoption for new commercial users in industries such as automotive, healthcare, aerospace, consumer goods, and advanced manufacturing.

HP Jet Fusion 3D printing solution



Jet Fusion 3D printing solution.

In 2016, HP launched its first commercial 3D printing solution, [HP Jet Fusion 3D 4200/3200](#). Our advanced HP Multi Jet Fusion technology enables the printing of high-quality parts up to 10 times faster³⁹ and at a lower cost⁴⁰ than other 3D print systems currently on the market. HP Jet Fusion 3D printers help customers simplify workflows and reduce prototyping costs. Similar to our digital graphic printing solutions but in the world of 3D, HP Jet Fusion enables on-demand, short-run printing, reducing waste-related costs and overall environmental impact.

To demonstrate the cost, efficiency, design optimization, and environmental benefits of this product, HP plans to manufacture up to 50% of the custom plastic parts for our existing 3D printers using HP Multi Jet Fusion technologies.

Open platform collaboration



To accelerate the adoption of commercial 3D printing, HP works closely with manufacturers and other industry partners, and introduced strategies for open materials and common software. Through HP's Multi Jet Fusion Open Platform, we work with partners to advance printer materials innovation and drive down related costs. We also helped found the [3FM Consortium](#), which established an industry-wide 3D printing file format standard. The HP Jet Fusion 3D printing solution was the first 3D printer fully compliant with the standard.

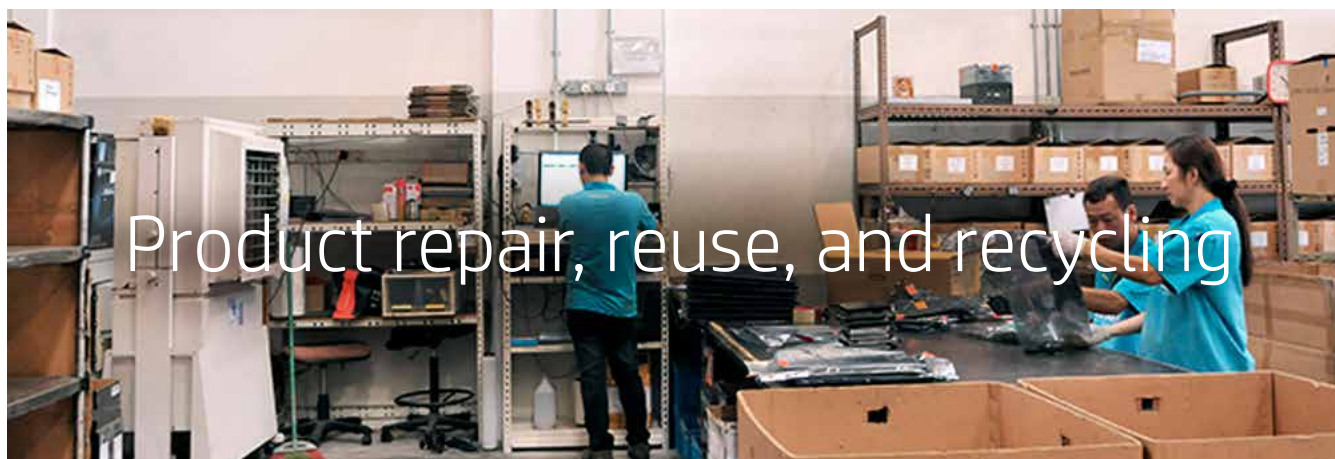
BMW Group: Applying HP 3D printing in car manufacturing and development

“We see major potential in our partnership with HP to investigate this new kind of 3D printing technology at an early stage.”

Jens Ertel, Head of BMW Group Additive Manufacturing Center

BMW Group has a track record of applying additive manufacturing processes to produce prototypes or custom parts that can be built into select designs for its premium vehicles. Looking for new technologies to shorten car development times and improve manufacturing efficiencies, the company was a natural fit as an early collaborator in developing HP's Multi Jet Fusion technology.

With more than 25 years of experience in the field of additive manufacturing, the BMW Group was one of the initial companies to test our 3D printing solution. Besides prototyping, BMW Group plans to use the technology also for serialized part production and personalization. To build on this collaboration, HP and BMW Group are conducting a life cycle assessment that will compare 3D manufacturing with traditional injection molding for the production of automobile parts.



Product repair, reuse, and recycling

Helping customers get the most from our products

The rapid pace of innovation and obsolescence in electronic products is increasing the urgency for a [circular economy](#) in which used products and materials are repurposed and kept in use as long as possible. Since the launch of our industry-leading [Planet Partners](#) return and recycling program, more than a quarter century ago, HP has driven this transformation in our industry.

We design products for [longevity](#), provide customers with guidance on how to maintain them, and provide comprehensive repair, refurbishment, reuse, and recycling programs. Increasingly, we use the materials we recapture from recycling to create new HP products through our closed loop programs. In 2016, we built on our long-standing commitment and set a new goal to recycle 1.2 million tonnes of hardware and supplies by 2025.

HP has long been committed to the responsible processing of used electronics. During 2017, to promote transparency and progress social and environmental standards in the electronics industry supply chain, we published a detailed [list](#) of our global recycling

Our priorities

Repair, remarket, and reuse hardware

- Provide repair services and sell replacement parts and components to extend product life
- Remarket new and nearly new returned hardware for reuse
- Ensure responsible processing of equipment for reuse through third-party audits

Recycle hardware and supplies

- Expand closed loop recycling processes and reuse materials in new HP products
- Break down products and recover materials
- Ensure responsible recycling through third-party audits
- Collaborate with partners and governments to advance responsible recycling regulations

2016 highlights

5.05 million
units of hardware repaired

1.25 million
units of hardware remarketed

102,800
tonnes of hardware recycled

17,100
tonnes of ink and toner
cartridges recycled

Our goals

1.2 million tonnes

Recycle 1.2 million tonnes of hardware and supplies by 2025, since the beginning of 2016.

vendor sites, a first in the industry. This reflects our confidence in HP's vendor network and addresses customer and stakeholder expectations about disclosure in this area. We hope that our leadership in this area will encourage other IT companies to do the same.




To improve regulation and management of e-waste across the sector, we collaborate with governments and industry stakeholders. See [Government relations](#) for more detail.

Customer programs

Recovering value for HP and our customers globally

HP offers comprehensive take-back programs in 73 countries and territories worldwide through a global network of reuse and recycling vendors. We commission third-party audits to monitor vendor conformance with our high standards and ensure that returned items are processed appropriately. To protect customer privacy, HP and its partners follow strict protocols to ensure that returned products complete comprehensive data-cleansing processes.

HP global take-back programs*

Program	Description	Progress in 2016
 <p>Hardware repair, remarketing, and reuse**</p>	<ul style="list-style-type: none"> HP provides repair and replacement services for computing and printing products. We remarket returned and refurbished computing and printing products. Through our HP Indigo reconditioning program, we refurbish units returned by customers. We follow strict processes outlined in our hardware reuse standard to protect user data and meet environmental requirements. 	<p>5.05 million units of hardware repaired</p> <p>1.25 million million units of hardware remarketed</p>
 <p>Hardware recycling</p> <p>Available in 62 countries and territories</p>	<ul style="list-style-type: none"> HP recycles returned products that cannot be repaired or reused. In Europe, the European Recycling Platform provides take-back and recycling services for our products. In the United States, hardware products can be dropped off for recycling at more than 1,600 Staples locations. U.S. customers can use the HP Consumer Buyback Program to exchange equipment for money or purchase credits. In Asia Pacific, HP participates in several producer responsibility organizations, such as the Australia and New Zealand Recycling Platform, Cartridges 4 Planet Ark (Australia), the Vietnamese Recycling Platform, and the Ink Satogaeri Program (Japan). If the equipment cannot be economically repaired or reused, we recycle it responsibly. We also provide pickup and recycling services to commercial customers. 	<p>102,800 tonnes of hardware recycled</p> <p>14% overall recycling rate of relevant HP hardware sales worldwide</p>
 <p>HP ink and toner cartridge recycling</p> <p>Available in 62 countries and territories</p>	<ul style="list-style-type: none"> Home users and commercial customers can return used HP ink and toner cartridges to more than 16,500 free, authorized drop-off collection sites around the world. In most countries, we also offer free pickup and mail-back options. All customers can go to our website for country-specific recycling instructions in their local language. We now recycle toner material, collected in North America and Australia, for reuse as colorant in the manufacturing of products for home users. In 2016, HP recycled 80% of the toner material that it received, 20% was treated in a waste-to-energy process, 0% went to landfill, and 0% was incinerated. 	<p>15,400 tonnes of HP LaserJet toner cartridges recycled</p> <p>1,700 tonnes of HP ink cartridges recycled</p>

* Information in this table is as of October 31, 2016.

**Availability of reuse offerings varies by location.

View a [full list](#) of reuse and recycling programs by country. See [Data](#) for more detail.

Vendor audits

We hold our reuse and recycling partners to high standards

HP requires our specialist reuse and recycling vendors to follow environmentally responsible processing techniques and comply fully with relevant regulations. Vendors must also attain third-party certification (R2, e-Stewards, or WEEE LABEX), where applicable. We contract Environmental Resources Management (ERM) to audit our vendors for conformance with the following policies and vendor standards:

- [Export of Electronic Waste to Developing Countries Policy](#)
- [HP Supplier Code of Conduct](#)
- [Reuse and Recycling Standards](#)

Audits assess vendors' environmental, health, and safety practices and performance and ensure that there is no "leakage" of materials to facilities outside our approved vendor network. Nonconforming vendors must submit corrective action plans within 30 days and address those items within 90 days. In extreme cases, we will cease business with vendors that lack sufficient transparency or are unwilling to make the changes we require.

Through ERM, HP audited 43 vendor facilities in 23 countries during 2016. This included repeat audits of 33 vendors to evaluate their efforts to improve performance. The most common categories of major nonconformance were health and safety (18%) and subvendor management and audits (17%). Other issue areas included environment, management systems, site security and controls, data destruction, and approved dispositions of processed materials. Findings for data destruction were limited gaps in processes, not breaches of data security. Because over one third of major nonconformances occurred at sites audited for the first time, HP's engagement brought best practices, enabling immediate performance improvements. HP has closed investigations of 86% of the major nonconformances identified in 2016, and we will continue to work closely with vendors to resolve the others as swiftly as possible. All sites with major nonconformances must be reaudited the following year to determine whether improvements are sustained.

Read a [statement](#) from ERM.

Data

Our footprint

Carbon footprint (Scopes 1–3, including from operations)*	2015	2016
GHG emissions from operations** [tonnes CO ₂ e]	403,000	383,700
Americas	173,400	164,100
Europe, Middle East, and Africa	98,600	88,400
Asia Pacific and Japan	131,000	131,200
GHG emissions intensity*** [tonnes CO ₂ e/\$ million of net revenue]	7.8	8.0
GHG emissions by scope [tonnes CO ₂ e]		
Scope 1		
Scope 1 emissions, by region	68,700	66,000
Americas	54,100	50,500
Europe, Middle East, and Africa	13,500	14,400
Asia Pacific and Japan	1,100	1,100
Scope 1 emissions, by type		
Natural gas	28,600	28,000
Americas	21,300	21,700
Europe, Middle East, and Africa	6,900	5,800
Asia Pacific and Japan	400	500
Diesel/gas/oil****	100	0
Americas	0	0
Europe, Middle East, and Africa	0	0
Asia Pacific and Japan	100	0
Transportation fleet†	32,700	31,000
Americas	26,400	23,400
Europe, Middle East, and Africa	6,000	7,300
Asia Pacific and Japan	300	300
Refrigerants (hydrofluorocarbons (HFCs))	4,400	4,300
Americas	3,500	2,700
Europe, Middle East, and Africa	600	1,300
Asia Pacific and Japan	300	300
Perfluorocarbons (PFCs)	2,900	2,700
Americas	2,900	2,700
Europe, Middle East, and Africa	0	0
Asia Pacific and Japan	0	0
Scope 2 (Market-Based Method)††		
Scope 2 emissions, by region	334,300	317,700
Americas	119,300	113,600
Europe, Middle East, and Africa	85,100	74,000
Asia Pacific and Japan	129,900	130,100
Scope 2 emissions, by type	334,300	317,700
Purchased electricity for operations	334,300	317,700

Carbon footprint (Scopes 1–3, including from operations)*	2015	2016
Americas	119,300	113,600
Europe, Middle East, and Africa	85,100	74,000
Asia Pacific and Japan	129,900	130,100
District cooling and heating (purchased) for operations	0	0
Americas	0	0
Europe, Middle East, and Africa	0	0
Asia Pacific and Japan	0	0
Scope 2 (Location-Based Method)		
Scope 2 emissions, by region	372,900	352,400
Americas	143,700	128,700
Europe, Middle East, and Africa	99,300	93,600
Asia Pacific and Japan	129,900	130,100
Scope 2 emissions, by type	372,900	352,400
Purchased electricity for operations	372,900	352,400
Americas	143,700	128,700
Europe, Middle East, and Africa	99,300	93,600
Asia Pacific and Japan	129,900	130,100
District cooling and heating (purchased) for operations	0	0
Americas	0	0
Europe, Middle East, and Africa	0	0
Asia Pacific and Japan	0	0
Scope 3	36,250,000	35,860,000
Materials extraction through manufacturing (category 1; also see Greenhouse gas emissions on page 25)	15,300,000	14,700,000
Capital goods (category 2)	200,000	200,000
Upstream energy production (category 3)^	100,000	100,000
Transport (categories 4 and 9; also see Product transportation on page 28)^^	1,300,000	1,300,000
Waste generated in operations (category 5)	De minimis ^{***}	De minimis
Business travel (category 6)‡	50,000	60,000
Employee commuting (category 7)	200,000	200,000
Upstream leased assets ^{††} (category 8)	De minimis	De minimis
Processing of sold products (category 10)	De minimis	De minimis
Product use (category 11) ^{†††} †††	19,100,000	19,300,000
Product end of service (category 12)	De minimis	De minimis
Buildings leased to others (category 13)	De minimis	De minimis
Franchises (category 14)	Not applicable	Not applicable
Investments (category 15)	De minimis	De minimis

* To calculate Scope 1, Scope 2, and Scope 3 emissions, HP has followed the principles outlined in the Greenhouse Gas Protocol. Additional details on calculations and methodology can be found in the [HP carbon accounting manual](#). Taking into account the separation of Hewlett-Packard Company on November 1, 2015, calculation for all years relates to supply chain, operations, and products and solutions associated with the business units that are now a part of HP Inc.

** Total includes HP's reported values for Scope 1 and Scope 2 market-based method emissions in table.

*** Emissions-intensity value was calculated using HP's annual revenue as characterized in financial reporting and Scope 1 and Scope 2 GHG emissions.

**** HP does not estimate or extrapolate diesel use for nonreporting sites.

† CO₂e emissions associated with CH₄ and N₂O account for less than 1% of total CO₂e emissions in this category.

†† Data in this section uses the market-based method. The company did not obtain supplier-specific emission rates other than the emission rate for the Palo Alto, California, United States, site due to the availability and feasibility of acquiring the data.

^ Scope 2 GHG emissions used to calculate this category were determined using the location-based method.

^^ These figures are based on product life cycle assessment-based estimates. They use a combination of HP-specific and industry data, and include additional upstream and downstream transport related to our products, as well as retail and storage. This data may differ from data reported by product transportation suppliers that HP contracts to deliver our products, as presented on [pages 28 and 70](#).

^^^ De minimis values are less than 0.25% of total Scope 3 emissions.

HP's global travel agency provides values which take into account the type of aircraft, passenger load, cabin class, and miles traveled for each ticketed trip. This data also includes rail travel carrier and distance traveled. Although these values fall below our quantitative reporting threshold of less than 0.25% of total Scope 3 emissions and could be reported as de minimis, we choose to report this category due to our ability to directly track this data, our level of influence over these emissions, and stakeholder expectations in this category

††† All facilities accounted for in Scope 1 and 2.

†††† Total GHG emissions from product use differ by less than 1% from values reported on [page 52](#), due to rounding.

††††† In 2016, we added commercial and industrial graphics printing solutions, which use large amounts of paper, to our product use footprint calculations. Overall GHG emissions from product use across our portfolio increased by 1% year over year. Without the addition of commercial and industrial graphics printing solutions, there would have been a 4% decrease overall.

Water footprint*	2015	2016
Water consumed by HP suppliers in their operations** [cubic meters]	13,900,000	12,600,000
Water consumption associated with the generation of electricity used by HP suppliers [cubic meters]	34,800,000	31,800,000
Water consumption in HP operations [cubic meters]	3,260,000	3,224,000
Water consumption associated with the generation of electricity used in HP operations [cubic meters]	3,400,000	3,200,000
Water consumption associated with the generation of electricity used by HP products [cubic meters]	106,900,000	103,300,000***
Water consumption associated with the manufacturing of paper used by HP customers with HP products [cubic meters]	46,800,000	52,900,000****

* Taking into account the separation of Hewlett-Packard Company on November 1, 2015, calculation for all years relates to supply chain, operations, and products and solutions associated with the business units that are now a part of HP Inc.

** This metric reports the amount of water consumed by HP's multi-tier supply chain, and not the amount withdrawn by first-tier suppliers as reported in Supply chain environmental impact on [page 30](#). Because water withdrawn can also be returned, water consumption is inherently lower.

*** In 2016, we added commercial and industrial graphics printing solutions, which use large amounts of paper, to our footprint calculations. Consumption in this category decreased by 3% including those products and 5% without them.

**** In 2016, we added commercial and industrial graphics printing solutions, which use large amounts of paper, to our footprint calculations. Consumption in this category increased by 13% including those products and decreased 2% without them.

Supply chain environmental impact

	2010	2013	2014	2015	2016
First-tier production supplier and product transportation-related GHG emissions intensity* [tonnes CO ₂ e/\$ million of HP net revenue]	95.0	70.1	71.8	74.6	
Production supplier GHG emissions**					
Scope 1 and Scope 2 emissions [tonnes CO ₂ e]	4,900,000	2,700,000	2,900,000	3,000,000	
Scope 3 emissions***** [tonnes CO ₂ e]		15,800,000	14,600,000	9,800,000	
Production suppliers with GHG emissions reduction-related goals [% of spend]		68%	95%	93%	
Production suppliers that reported using renewable energy**** [% of spend]		28%	10%	47%	
Product transportation GHG emissions† [tonnes CO₂e]					
Total	1,430,000	1,200,000	1,260,000	1,280,000	1,200,000
Road (includes rail)	350,000	350,000	330,000	330,000	350,000
Ocean	150,000	250,000	230,000	200,000	150,000
Air	930,000	600,000	700,000	750,000	700,000
Nonproduction supplier Scope 1 and Scope 2 emissions†† [tonnes CO₂e]				240,000	
Production supplier nonhazardous waste generation†††:**** [tonnes]		91,000	123,000	105,000	
Production supplier hazardous waste generation†††:**** [tonnes]		31,000	45,000	48,000	

	2010	2013	2014	2015	2016
Production suppliers with waste-related goals [% of spend]		58%	59%	57%	
Production supplier water withdrawal for use^{††††} [cubic meters]		26,000,000	40,000,000	44,000,000	
Production suppliers with water withdrawal-related goals [% of spend]		59%	74%	80%	

* Intensity is calculated as the portion of first-tier production and product transportation suppliers' reported GHG emissions attributable to HP divided by HP's annual revenue. This method normalizes performance based on business productivity. Intensity is reported as a three-year rolling average to decrease the impact of variance year over year and highlight longer-term trends. Production supplier GHG emissions include Scope 1 and Scope 2. Taking into account the separation of Hewlett-Packard Company on November 1, 2015, calculation for all years uses HP revenue and spend associated with the business units that are now a part of HP Inc. The year 2015 is the most recent for which data is available. Data reflects extrapolation to 100% of first-tier production suppliers.

** Emissions are estimated based on suppliers' emissions and their dollar volume of HP's business compared to their total revenue. Taking into account the separation of Hewlett-Packard Company on November 1, 2015, calculation for all years uses spend associated with the business units that are now a part of HP Inc. The majority of these companies report on a calendar year basis. The year 2015 is the most recent for which data is available. Data reflects extrapolation to 100% of first-tier production suppliers. Data collected represented 95% of HP spend. The World Resources Institute defines Scope 1, 2, and 3 GHG emissions in its Greenhouse Gas Protocol; see www.ghgprotocol.org/calculation-tools/fag. This data differs from the product life cycle assessment-based estimates for materials extraction through manufacturing presented on [pages 22 and 69](#), which are based on a different calculation methodology and use a combination of HP-specific and industry data.

*** Suppliers may not report all Scope 3 categories, although the number of categories reported by many suppliers has increased over the last few years. We believe that variation in this data reflects inconsistent reporting practices more than changes in actual performance.

**** We believe that variation in this data reflects inconsistent reporting practices more than changes in actual performance.

† The figures for product transportation GHG emissions are based on data reported by product transportation suppliers that HP contracted to deliver products (for years prior to 2016, before the split of Hewlett-Packard Company, calculations are adjusted to reflect emissions attributable to HP's current business units). They may differ from the product life cycle assessment-based estimates presented on [pages 22 and 69](#) which are based on a different calculation methodology, use a combination of HP-specific and industry data, and include additional upstream and downstream transportation related to the company's products, as well as retail and storage.

†† Emissions are estimated based on suppliers' emissions and their dollar volume of HP business compared to their total revenue. Accounting for the separation of Hewlett-Packard Company on November 1, 2015, the calculation uses spend associated with the business units that are now part of HP Inc. In cases where spend cannot be disaggregated, 2016 spend is used as an estimate. The majority of these companies report on a calendar year basis. The year 2015 is the most recent for which data is available. Data reflects extrapolation to 100% of strategic nonproduction suppliers. Data collected represented 28% of supplier spend.

††† Waste data is estimated based on suppliers' waste data and their dollar volume of HP business compared to their total revenue. Taking into account the separation of Hewlett-Packard Company on November 1, 2015, calculation for all years uses spend associated with the business units that are now a part of HP Inc. The majority of these companies report on a calendar year basis. The year 2015 is the most recent for which data is available. Data reflects extrapolation to 100% of first-tier production suppliers. Data collected represented 60% of supplier spend for nonhazardous waste and 50% for hazardous waste, compared to 52% and 52% the prior year. We believe that variation in this data reflects inconsistent reporting practices more than changes in actual performance.

†††† This metric reports the amount of water withdrawn by suppliers, not the amount consumed by our multi-tier supply chain as reported in our water footprint on [pages 23 and 70](#). Because water withdrawn can also be returned, this footprint is inherently larger. Refers to first-tier suppliers for manufacturing, materials, and components. Withdrawal is estimated based on suppliers' reported water withdrawal and their dollar volume of HP business compared to their total revenue. Taking into account the separation of Hewlett-Packard Company on November 1, 2015, calculation for all years uses spend associated with the business units that are now a part of HP Inc. The majority of these companies report on a calendar year basis. The year 2015 is the most recent for which data is available. Data reflects extrapolation to 100% of first-tier production suppliers. Data collected represented 72% of supplier spend, compared to 73% the prior year.

Operations*

	2015	2016
Energy use [million kWh]	931	879
Energy intensity** [thousand kWh/\$ million of net revenue]	18.1	18.2
Direct energy use in operations (corresponds to Scope 1 emissions)*** [million kWh]	161	157
Natural gas [million kWh]	157	154
Americas	117	119
Europe, Middle East, and Africa	38	32
Asia Pacific and Japan	2	3
Electricity (generated on-site)	4	3
Renewable	3	2
Diesel/gas/oil/LPG ****	1	1
Indirect energy use (corresponds to Scope 2 emissions) [million kWh]	770	722
Electricity (purchased)	770	722
Americas	352	316
Europe, Middle East, and Africa	198	187
Asia Pacific and Japan	220	219
Voluntary purchases of renewable energy†	93	75
Voluntary purchases of no/low-carbon energy	0	0

	2015	2016
Supplier-specific renewable energy	33	28
District cooling and heating (purchased)	0	0
Americas	0	0
Europe, Middle East, and Africa	0	0
Asia Pacific and Japan	0	0
Nonhazardous waste [tonnes]	28,100	27,800
Americas	16,000	15,900
Europe, Middle East, and Africa	7,400	8,000
Asia Pacific and Japan	4,700	3,900
Nonhazardous waste landfill diversion rate [% of total produced]		
Global	90.9%	90.1%
Americas	91.6%	91.2%
Europe, Middle East, and Africa	85.5%	85.4%
Asia Pacific and Japan	97.2%	95.1%
Hazardous waste^{††} [tonnes]		5,560
Americas		1,600
Europe, Middle East, and Africa		2,370
Asia Pacific and Japan		1,590
Water consumption, by region [cubic meters]	3,260,000	3,224,000
Americas	1,640,000	1,615,000
Europe, Middle East, and Africa	306,000	285,000
Asia Pacific and Japan	1,314,000	1,324,000
Water consumption, by source^{†††} [cubic meters]	3,260,000	3,224,000
Municipal water	2,548,000	2,473,000
Wastewater from another organization ^{††††} (NeWater)	703,000	747,000
Tanker water [†]	9,000	0
Well water	0	4,000
Reused treated sewage treatment plant water^{††} [cubic meters]	20,000	75,000
Ozone depletion potential of estimated emissions^{†††} [kg of CFC-11 equivalent]	194	128
Americas	120	16
Europe, Middle East, and Africa	0	33
Asia Pacific and Japan	73	80

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

** Historical energy intensity values were calculated using HP's annual revenue as characterized in financial reporting and direct and indirect energy use.

*** Fuel consumption from HP's transportation fleet is not included in the Direct energy use in operations figures.

**** Diesel is mostly used at HP for testing generators. In limited cases, diesel is also used for long-term on-site energy generation.

† Renewable energy and renewable energy credits, excluding renewable energy provided by default in the power grid.

†† Accounting for the separation of Hewlett-Packard Company on November 1, 2015, it was not feasible to include hazardous waste data specific to HP Inc. for 2015.

††† "Water consumption" includes municipal water, wastewater from another organization, tanker water, and well water. Direct use of surface water and rainwater are insignificant and not included in data reported. Water consumption does not include reused treated sewage treatment plant water. Water consumption is referred to as "Direct consumption" in the Operations segment of HP's water footprint on [page 23](#).

†††† NeWater is ultra-purified wastewater used in manufacturing operations in Singapore.

† Tanker water is well water that is delivered to the site by tanker truck.

†† This water is used for landscaping and toilets.

††† We calculate ODS emissions by tracking sites that have reported replacing refrigerants due to leakage, and apply an intensity factor based on those actual quantities for nonreporting sites. This approach and the relatively small number of sites reporting data each year can result in significant variations in data that do not necessarily reflect changes in actual performance.

Products and solutions

	2012	2013	2014	2015	2016
Recycled plastic used in HP toner and ink cartridges, cumulative [tonnes]	53,755	62,163	71,749	80,468	89,478
Ink	32,304	37,512	43,798	50,080	55,597
Toner	21,451	24,651	27,951	30,388	33,881
Estimated materials use intensity for HP high-volume personal systems and printers* [tonnes/\$ millions of net revenue]					
Personal systems					
Metal			4.5	3.6	3.0
Plastic			1.9	1.5	1.6
Wires/cables			0.8	0.6	0.6
PCAs			0.7	0.6	0.6
LCDs			1.4	1.2	1.8
Batteries			0.3	0.2	0.1
Total			9.4	7.7	7.7
Printers					
Metal			14.7	15.4	17.6
Plastic			28.0	30.9	33.8
Wires/cables			0.4	0.4	0.5
PCAs			1.7	1.7	2.0
LCDs			0.0	0.0	0.0
Batteries			0.0	0.0	0.0
Total			45	48	54
GHG emissions from product use** [tonnes CO₂e]					
Personal systems				9,100,000	8,200,000
Desktop and enterprise printers (energy)				3,600,000	3,600,000
Commercial and industrial graphics printing solutions (energy)				Not available	250,000
Printing consumables for desktop and enterprise printers (paper and ink/toner cartridges)				6,400,000	6,500,000
Printing consumables for commercial and industrial graphics printing solutions (paper and other supplies)				Not available	790,000
Total				19,100,000	19,300,000
Water consumption related to product use*** [cubic meters]					
Personal systems				76,400,000	70,000,000
Desktop and enterprise printers (energy)				30,500,000	31,100,000
Commercial and industrial graphics printing solutions (energy)				Not available	2,200,000
Printing consumables for desktop and enterprise printers (paper)				46,800,000	45,800,000
Printing consumables for commercial and industrial graphics printing solutions (paper)				Not available	7,200,000
Total				153,700,000	156,300,000

* Personal systems data is based on individual products that are representative of the HP product portfolio for those years and does not include accessories sold separately. Printer values are based on individual product data. Estimates for printer volumes do not include graphic arts, industrial, web press printers, scanners, or ink or toner cartridges. Product data is based on fiscal year for 2016 and calendar year for 2014 and 2015. Net revenue data is based on HP's fiscal year. In some cases, segments do not add up to total due to rounding.

** Segments for 2016 do not add up to total due to rounding.

*** Total water consumption related to product use differs by less than 1% from the values reported on [pages 23](#) and [70](#), due to rounding.

Product repair, reuse, and recycling*

	2016
Total recycling of hardware and supplies [tonnes, approximate]	119,900
Electronic equipment repaired [units]	5,050,000
Electronic equipment returned before use and remarketed [units]	1,250,000
Number of countries and territories with HP return and recycling programs	73
Total recycling, by region [tonnes]	
Americas	48,800
Europe, Middle East, and Africa	59,200
Asia Pacific and Japan	11,900
Total recycling, by type [tonnes]	
Hardware	102,800
HP toner cartridges**	15,400
HP ink cartridges**	1,700
HP toner cartridge recycling	
HP LaserJet market covered by program [%]	92%
Composition [%]	
Materials recycled into new products	80.9%
Materials used for energy recovery	16.8%
Reuse of components	2.3%
Material in storage—pending processing	0.0%
Incineration	0.0%
Landfill	0.0%
HP ink cartridge recycling	
HP ink market covered by program [%]	91%
Composition [%]	
Materials recovered for recycling	77.9%
Materials used for energy recovery	21.6%
Reuse of components	0.0%
Material in storage—pending processing	0.4%
Incineration	0.0%
Landfill	0.0%

* 2016 is HP's new baseline for this data, following the separation of Hewlett-Packard Company on November 1, 2015. 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. HP LaserJet toner and ink cartridge recycling data is for calendar year. The remaining data is based on the HP fiscal year. Although for HP supplies we report the composition of recovered materials, we cannot provide this data for hardware because we do not have operational control over all recycling processes and so do not have access to this information. Some segments do not add up to total due to rounding. Although we do not include data prior to 2016 in the Product repair, reuse, and recycling section, the vast majority of product hardware recycling data, and all toner and ink cartridge recycling data, reported in past years was associated with the business units that are now a part of HP Inc. Through 2015, Hewlett-Packard Company reported 1,497,500 tonnes of cumulative computer hardware and supplies recycling combined.

** Includes cartridges returned by customers only.



Society

We're using our technology, innovation, and scale to create a more just and inclusive society.



Supply chain responsibility

Manufacturing products with integrity

Every 60 seconds, HP delivers 102 PCs, 63 printers, and 983 consumables to customers all over the world.¹ Meeting our customers' needs would not be possible without a dynamic, sustainable, and resilient supply chain. Hundreds of production suppliers, thousands of nonproduction suppliers,² and workers around the world bring HP's diverse and vast product line to life.

Our principles

We believe that every person deserves to be treated with dignity and respect.

We insist that workers in our supply chain have fair treatment, safe working conditions, and freely chosen employment.

Our commitment extends beyond the factory floor.

We engage extensively with workers to promote wellness and enhance their skills, empowering them to become leaders in their community.

We use our global reach to drive lasting improvements.

We are transparent about the challenges in our supply chain and we rally businesses and governments to build resilience and respect for human rights and the environment.

2016 highlights

98%

of factories reporting monthly data met student worker guidelines

1st

place ranking in NGO Know the Chain's [inaugural benchmark](#) of ICT companies' efforts to protect workers in their supply chains from forced labor

25%

increase in average supplier performance in social and environmental responsibility (SER) Scorecard

Our goals

Supplier engagement

2X

Double factory participation in our supply chain sustainability programs by 2025, compared to 2015

Capability building

500,000

Develop skills and improve well-being of 500,000 factory workers by 2025, since the beginning of 2015

For more than a decade, HP has demonstrated industry leadership by developing innovative ways to strengthen social and environmental conditions in our supplier factories. Our products are engineered with integrity and high regard for every person

who has a hand in bringing them to market. We work proactively to protect and empower workers, source minerals responsibly, promote inclusion and transparency, and drive lasting improvements across our supplier base.

The year 2016 marked the first of HP as a new company. We now operate with a slightly smaller supply chain, more integrated internal sustainability governance, and improved visibility to risks and challenges. In 2017, we set goals to increase supplier participation in our programs and continue to improve workers' skills and well-being.

Increasing supply chain transparency

Meeting stakeholder expectations for responsible sourcing



Factory worker wearing personal protective equipment at a supplier factory.

At HP, we recognize the clear business benefits of sustainable manufacturing. Sustainability is embedded into HP's business model, and driven by people at all levels of the company. With increasing stakeholder interest in supply chain issues, HP's focus on external transparency is more important than ever. Customers care about where and how their products are made, and want to understand how we manage and address supply chain issues. In 2016, customers with sustainable purchasing criteria (including criteria related to eco-labels) represented a total of more than \$14 billion of existing and potential business revenue.

Many HP customers now include detailed requirements related to social and environmental responsibility (SER) in their supplier contracts, just as we have done with our own suppliers for years. In 2016, we developed new tools to support our regional sales teams in addressing customer requests related to supply chain responsibility.

Around the world, regulations are also impacting corporate supply chain approaches, adding compliance requirements to previously voluntary SER efforts. We see value in all industries adopting high SER standards and welcome the opportunity for open dialogue with governments and other businesses to address the most challenging supply chain issues, including human rights and forced labor.

In addition to regulatory engagement, HP lends its supplier SER expertise to NGOs and other stakeholders. HP is a founding member of the Electronic Industry Citizenship Coalition (EICC), a consortium of companies driving improvements in global supply chains through collaboration and shared tools. In 2016, we participated in working groups focused on vulnerable workers, chemical management, and the validated audit process (VAP), where we engage with other companies to share best practices and review, align, and continually improve industry policies and processes.

Driving sustainable factories

We assess suppliers to make tangible improvements

We monitor supplier SER performance through audits, focused assessments, and monthly key performance indicator (KPI) tracking designed to identify risks related to labor, health and safety, environment, ethics, and management systems as outlined in the [HP Supplier Code of Conduct](#). Based on supplier results, we address risks and drive improvement through targeted capability building, remediation, and industry collaboration. Additionally, our supplier SER scorecard integrates main aspects of supplier

social and environmental performance into a single performance score to be used in procurement negotiations with suppliers. Collectively, these tools drive improvement in suppliers' social and environmental performance and create an impact on and beyond the factory floor.

To increase impact and elevate SER practices in more supplier factories, we have set a goal to double factory participation in our supply chain sustainability programs by 2025, compared to 2015. Our supply chain is expansive, and we are committed to increasing both the number of suppliers that participate in our programs and the depth of their engagement. To have the greatest impact, we match suppliers with programs that best meet their SER needs. Below is a list of our diverse portfolio of sustainability programs.

Monitoring and performance improvement tools	Description	2016 progress*
Audits	<ul style="list-style-type: none"> HP participates in the EICC Validated Audit Program (VAP), which uses independent external auditors and separate third-party quality control for added credibility On-site audits provide the broadest and deepest measurement of conformance with the HP Supplier Code of Conduct and establish whether a supplier has systems to maintain and improve performance. 	<ul style="list-style-type: none"> HP conducted 155 audits of production and nonproduction suppliers in 2016 89% of audits were third party certified EICC VAP See detailed findings below
Focused assessments	In addition to comprehensive audits, we target specific risks through focused assessments.	<p>HP conducted 29 focused assessments in 2016:</p> <ul style="list-style-type: none"> 6 Student Worker Assessments in China 6 Foreign Migrant Worker Assessments in Malaysia, Taiwan, and Thailand 10 Health and Safety Assessments in China 7 new suppliers in China onboarded <p>See labor and health and safety findings in the Zero-tolerance (immediate action required) findings section below</p>
Labor KPI program	<ul style="list-style-type: none"> High-risk suppliers report weekly metrics which we share with company procurement managers monthly and senior executives quarterly. Tracks 46 indicators from 44 final assembly suppliers and key commodity suppliers with significant risk related to foreign migrant workers, student workers, working hours, overtime, and day of rest. 	<ul style="list-style-type: none"> Student worker conformance^{*,^}: 98% Worker hours conformance^{***,^}: 89% Day of rest conformance^{****,^}: 96% Added foreign migrant worker conformance to supplier reporting requirements, and revamped reports for more effective communication with and escalation to upper management.
SER scorecard	<ul style="list-style-type: none"> Covers final assembly suppliers and key commodity groups. Measures supplier performance and sets expectations on a range of SER factors that includes audit scores, product and material compliance, mineral sourcing, labor management, and environmental management. The SER scorecard influences suppliers' overall performance score, which also covers quality, supply, and cost. Poor SER performance by a commodity supplier can decrease their overall score by as much as 50%. 	<ul style="list-style-type: none"> Supplier SER scores increased by 25% on average since they joined the program. In 2016, the average score increased by 14% compared to 2015. All power supply and hard drive suppliers reached the top level "Preferred" status in 2016 after diligent training and follow-up by procurement managers. See results by supplier group on the next page.
Capability building	In partnership with local and international NGOs and other stakeholders, we work with suppliers to improve key areas of SER performance, such as worker empowerment and SER management system development.	During 2016, 45,700 supplier employees participated in 14 projects in 5 countries. See more detail about our programs online.

* Metrics apply to participating suppliers for each program.

** Suppliers in China with student workers representing 20% or less of total employees.

*** Suppliers' employees working fewer than 60 hours per week on average.

**** Suppliers' employees receiving at least one day of rest each seven-day workweek.

[^] Based on production-line workers at final assembly and select commodity sites participating in the HP KPI program and audit results.

We continue to expand the list of suppliers in the KPI program based on business risk, country risk, and identified nonconformances.

More information about our monitoring and performance improvement tools, as well as our management system and risk framework, can be found in [Supply chain responsibility: Our approach](#).

HP's procurement team delivers SER results



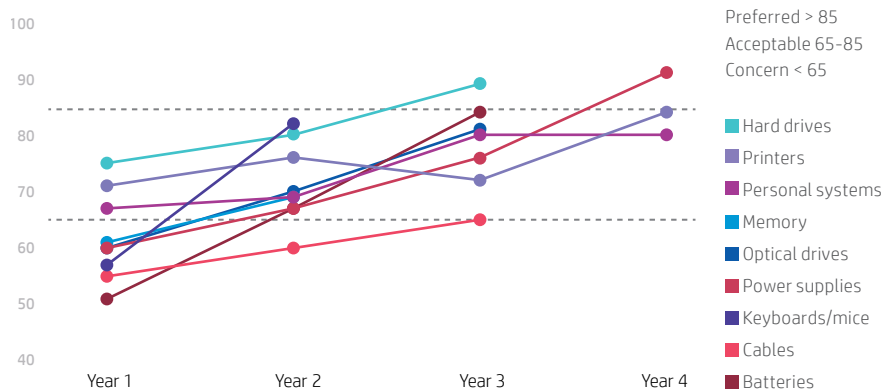
Workers take a break.

HP's procurement team is at the center of our efforts to build a sustainable supply chain. Through ongoing relationships with suppliers, these employees are uniquely positioned to convey how our SER requirements benefit suppliers' business. In recent years, procurement team members have embraced the opportunity to integrate sustainability into business reviews and day-to-day engagement with suppliers. Procurement managers collaborate closely with suppliers to educate them about our SER expectations, provide guidance on improvements, and to remediate outstanding issues. By combining passion for sustainability with robust internal management systems and incentives, SER becomes second nature for our suppliers.

Senior HP executives also underscore the importance of SER in communications both with suppliers and our employees, and HP management globally has helped motivate a cultural shift toward valuing SER in the procurement process. This has translated into significant gains in supplier SER performance. By 2016, two commodity groups, Power and Hard Disk Drives (HDD), had achieved average scores in the top status level ("Preferred"), with one HDD supplier scoring 100%. When procurement managers have accountability for sustainability we see a clear outcome: significant improvement in supplier practices.

Average scores by supplier group

SER scorecard results



A worker packages a newly repaired PC in a Singapore facility.

Combating forced labor

Our industry-first standard protects migrant workers

In search of economic opportunity, foreign migrant workers often face unfair treatment in the workplace and are vulnerable to exploitation and human trafficking. HP's [Foreign Migrant Worker Standard](#), an IT industry first, seeks to protect this vulnerable population in our supply chain. We determined that requiring direct employment, reinforcing the rights of workers to retain their passports and personal documentation, and prohibiting

“Workers in global supply chains deserve fair treatment. They should not have to pay to work. Collaboration among leading companies on this issue is critical to inspire and achieve the scale and momentum needed to advance the responsible recruitment of migrant workers globally.”

Stuart Pann, HP Chief Supply Chain Officer

any worker-paid recruitment fees were proactive actions that we could take to reduce forced labor or trafficking conditions. In 2015 and 2016, we performed detailed assessments of high-risk production suppliers. Examples of findings from our in-depth assessments include the withholding of passports and/or school certificates, as well as lack of policies and structures to ensure proper management while hiring from labor agencies. All violations to our code found in 2016 have either been fully addressed or are undergoing verification of corrective action.

It is unfair for any worker to have to pay to get a job. At HP, we are working with suppliers to return fees withheld from workers, including the Malaysian government’s foreign worker levy. Although EICC guidelines and local law allow this fee, we believe workers should not be burdened with the expense and our supplier facilities should absorb the costs. In 2016, we encouraged the “employer pays principle” in the Leadership Group for Responsible Recruitment, where we outlined six steps to eradicate worker fees in the next decade with other member companies.

In 2016, HP also worked with the NGO ELEVATE to pilot a “workplace of choice” program in two Malaysian supplier factories. Our aim is to explore different grievance mechanism options in order to strengthen existing platforms for workers to voice their questions and concerns.

In 2016, the NGO [Know the Chain](#) ranked HP first in its inaugural benchmark of information and communications technology companies’ efforts to protect workers in their supply chains from forced labor. We were also featured in a [study](#) by HULT International Business School and the Ethical Trading Initiative on corporate leadership in addressing modern slavery. View HP’s [full statement](#) in response to the UK Modern Slavery Act.

Empowering and protecting workers

We support the most vulnerable people in our supply chain



Manager documenting inventory information in a packaging facility.

HP seeks to protect and empower all workers who make our products both on and beyond the factory floor. Working with nonprofit partners, we conduct capability building and well-being programs that support workers’ safety, work/life balance, health, and financial security. We pay particular attention to vulnerable groups including women and students as well as foreign migrant workers.

HP is committed to further developing the skills and improving the well-being of 500,000 workers by 2025, since the beginning of 2015, with a focus on vulnerable workers. During 2016, 45,700 supplier employees participated in 14 projects in 5 countries. This brings the total to 123,700 since the beginning of 2015.

Women’s rights are human rights

Extensive research has shown that when women are healthy, educated, and can participate in the economy, their families, children, and communities benefit. Women make up a substantial part of our suppliers’ workforce, so supporting their well-being also contributes directly to our business success.

In 2016, HP joined our customer Diageo, a UK beverage company, to empower more than 4,000 women in four of our supplier factories in China and Malaysia. Female workers took part in different leadership training programs that improved their ability to navigate stressful work situations (42% of participants); manage their time (29%); communicate

16,800

Women trained and educated in 2016 through worker well-being programs

effectively with colleagues, leaders, and family members (27%); and improve decision making (22%). Nearly 190 women received additional training as peer educators to foster a cycle of peer education and mentorship in their communities.



Wang Xia speaking at the Women's Leadership Training at a Sunrex factory in China.

Wang Xia, a supervisor of quality control who took part in the program at Sunrex Suzhou, an HP keyboard supplier in China, describes her experience:

"I manage 30-plus staff. Being in middle management [means] you need to deal with both your manager and your team. You need to have good communication skills, work independently, and give clear instructions to help [your team] get things done. As managers, we found the training very useful. Sometimes our work is very stressful due to the timely response needed, so our dialogue with others may be too blunt and direct. The training allowed us to put ourselves in other worker's shoes, and [helped] us frame questions or requests in a positive and encouraging way. This makes teams more harmonized and effective. I am proud of the team spirit of my department."

Engaging students and temporary workers

In 2016, HP hosted two large supplier forums in China to reinforce our expectations for treatment of student and juvenile employees. New Chinese regulations coupled with strengthened EICC requirements supported our deepening supplier engagement on young workers' rights and helped us to better manage the requirement in our suppliers' work environments.

The [HP Supplier Code of Conduct](#) and our industry-leading [Student and Dispatch Worker Standard for Supplier Facilities in the People's Republic of China](#) lay out our expectations and requirements for employing and managing these groups. We conduct student worker assessments or audits at high-risk supplier sites. In 2016, supplier conformance to our student worker requirements averaged 98%, up from 91% the previous year (see [Data](#) for more detail).



Employees in a facility in Kuala Lumpur, Malaysia, working through a conflict resolution scenario in a workshop with CCR-CSR.

In 2016 we collaborated with Disney, an HP customer, and the Center for Child Rights and Corporate Social Responsibility (CCR-CSR) to sponsor a worker training system through WeChat, China's largest social media platform. By scanning QR codes in posters around our supplier facilities, over 600 workers accessed educational videos, quizzes, and games about communicating with management, work/life balance, and skills development. Also with the CCR-CSR, we held training workshops at six Malaysian supplier factories where workers and managers discussed creating a more inclusive environment for migrant laborers through effective communication and awareness of worker rights.

Promoting health and safety

We are working toward cleaner electronics manufacturing

From operating heavy machinery to handling chemicals, we have policies in place so that every factory employee can live and work in a clean, hygienic, and safe environment. HP analyzes information from our supplier monitoring tools and from our worker and stakeholder engagement to identify and address health and safety risks. In 2016, we supplemented our auditing with 10 on-site health and safety assessments. All identified nonconformances from those assessments have since been resolved.

Manufacturing process substances

We take a science-based approach to assessing the potential human health and environmental impacts of substances used in making HP products. The [HP Supplier Code of Conduct](#) requires suppliers to employ robust management systems to catalog and evaluate process chemicals, eliminate or manage hazardous substances, and provide workers with protective equipment and training. Suppliers must also follow the chemical use restrictions of the [HP General Specification for the Environment](#). We provide guidance regarding suitable alternatives through our alternative materials assessment program. For more information, see [Materials](#).

HP is a founder and design team member of the [Clean Electronics Production Network's \(CEPN\) Green America program](#), whose goal is zero exposure of workers to chemicals in electronics manufacturing processes. In 2016, we worked with CEPN on a framework to reduce and mitigate worker exposure to manufacturing process chemicals, and will continue working with stakeholders to protect worker health.

Audit results

Identifying risk and using data to drive change

SER audits and assessments, 2016

Initial audits	58
Follow-up audits	67
Full reaudits	30
Health and safety assessments	10
Onboarding assessments	7
Vulnerable worker group (student and foreign worker) assessments	12
Allegation investigations	3

Audits measure conformance with the HP Supplier Code of Conduct and are an important part of our system for driving sustained improvements in our suppliers' SER performance. HP uses the [Validated Audit Process \(VAP\)](#), a collaborative approach that reduces the burden on partners in our supply chain from multiple requests for SER audits. The VAP meets the need for a high-quality, consistent, and cost-effective standard industry assessment of labor, ethics, health, safety, and environmental practices based on the EICC code of conduct and relevant laws and regulations. In 2016, we conducted 184 audits and assessments of final assembly and component suppliers.

Zero-tolerance findings (immediate action required)

Zero-tolerance findings (immediate action required) are the most serious type of supplier nonconformance. These findings include child labor, forced labor, severe forms of discrimination, 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. We take such findings very seriously, and require suppliers to cease all related practices and report corrective actions taken within 30 days of the original audit. We follow up closely to ensure that all required corrective actions are completed, and visit sites to confirm resolution. Zero tolerance items do not necessarily involve termination of the supplier and we will work with suppliers as appropriate to improve their performance and worker conditions in these areas.

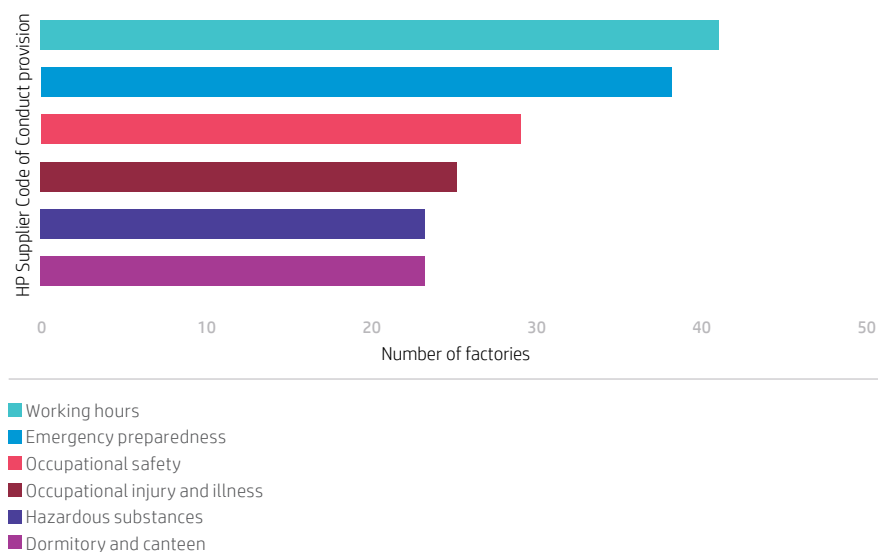
In 2016, our audits identified four zero-tolerance findings at supplier sites, including:

- Two findings related to emergency preparedness at two commodities suppliers, including blocked/locked emergency exits.
- One finding related to withholding foreign migrant workers' passports and one related to workers paying employment fees, at the same commodity supplier.

All of these findings have been resolved through immediate action and follow-up. We expect to see our engagement with these suppliers lead to long-term improvement in working conditions and overall SER performance.

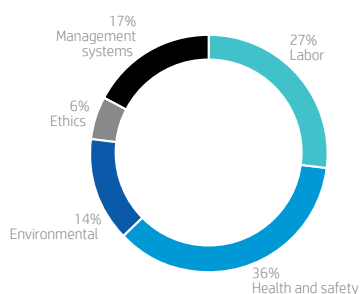
Detailed findings

Most common types of major nonconformance, 2016*



* Data is from audits of production suppliers; data from assessments is not included. Audit data does not necessarily represent the same supplier sites as the previous year.

Distribution of major nonconformances by section of HP Supplier Code of Conduct, 2016*
percentage of total



* Data is from audits; data from assessments is not included. Audit data does not necessarily represent the same supplier sites as the previous year.

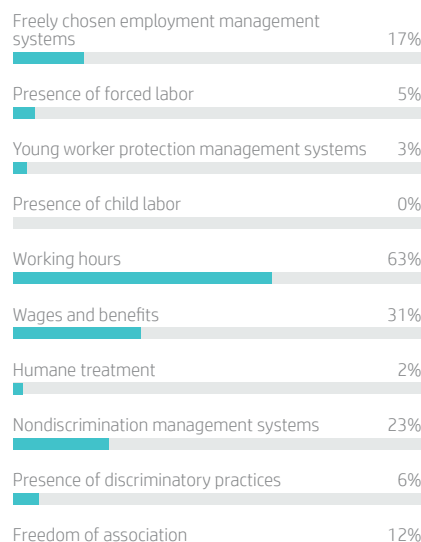
Almost two-thirds of the major nonconformances uncovered in our audits of production suppliers in 2016 continued to center on labor and health and safety. While many suppliers have achieved mature SER management systems, gaps in documentation, monitoring systems, and processes can lead to nonconformances. Many of these issues are relatively straightforward to resolve, such as a poorly lit exit sign or spacing between factory lines. Other issues are more challenging, such as the lack of robust systems to track, monitor, limit, and report workers' time, which can fluctuate depending on demand and seasonal changes in production needs. To help address these issues, suppliers have improved their planning for fluctuations in labor demands, especially in peak seasons to accommodate natural employee turnover during times such as Chinese New Year.

Recent significant changes related to supplier audits included:

- Production suppliers in the 2015 and 2016 audit cycle were evaluated based on the most recent EICC VAP audit protocol (5.0), amended in 2015 to drive ongoing improvement by facilities and more effectively assess major risk areas.
- Environment, health, and safety (EHS) experts assisted on selected audits requiring technical expertise.
- Critical documents such as permits were reviewed in advance of audits.
- New provisions were added in areas such as health and safety communication, storm water management, and energy consumption and greenhouse gas emissions. Auditors often find nonconformances in these areas until suppliers increase their familiarity with the elevated standards.
- Updated guidance was also provided on 19 major code revisions.

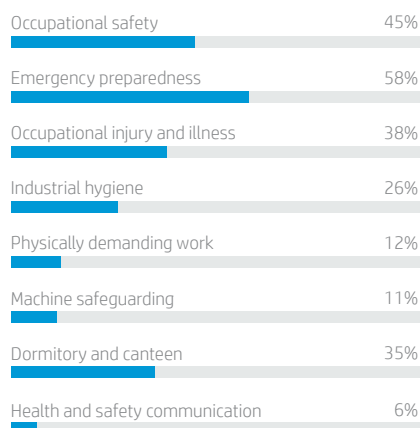
Labor

rates of major nonconformances
of sites audited



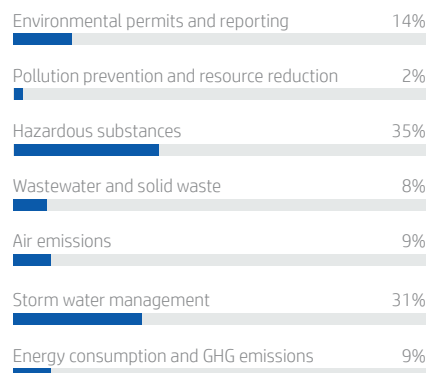
Health and safety

rates of major nonconformances
of sites audited



Environmental

rates of major nonconformances
of sites audited



Labor

Excessive working hours³ remains the biggest single labor challenge in our supply chain since workers often work long hours to earn more money and suppliers lack effective systems to prevent workers from taking on more shifts. However, among suppliers in our KPI program, 89% of workers related to HP production met working hours requirements. VAP audits measure working hours in an entire supplier facility, whereas KPI suppliers are evaluated only on HP production lines. HP will continue to work closely with suppliers to reduce cases of nonconformance.

Major nonconformances related to nondiscrimination management systems rose from 11% in 2015 to 23% in 2016. This is due primarily to the recent inclusion of religious accommodation in the EICC Code. Many suppliers consequently lacked policies to ensure this protection.

In the past few years, HP has worked to improve management systems regarding vulnerable worker groups and we have collaborated with suppliers to understand and implement related guidance. As a result, major nonconformance rates in young worker protection management systems decreased from 18% in 2014 to 3% in 2016. Also during that period, rates for freely chosen employment management systems decreased from 24% to 17%.

Health and safety

Due to elevated code expectations and the addition of new suppliers, rates of major nonconformance increased in occupational safety and occupational injury and illness compared to 2015. For occupational safety, our auditors found issues such as missing handrails or faulty equipment maintenance procedures. For occupational injury and illness, major nonconformances related primarily to injury and illness permits and first aid response reporting. We worked with these suppliers to better manage and report worker injuries and illness.

Emergency preparedness also remains a key challenge, with a 58% rate of major nonconformance by audited suppliers, up from 47% in 2015. Most of these findings related to inadequate exit signs and/or exit lighting and installation of the wrong type of doors for an emergency exit, reflecting updated guidance in these areas in the EICC VAP audit protocol. We anticipate that performance will improve as suppliers become more familiar with those changes.

During 2017, we are working with two large suppliers in China and Social Accountability International (SAI) to use SAI's TenSquared capability building program to target chemical management and fire evacuation challenges over a 100-day period. Through this program, workers and managers will use root cause analysis to collectively tackle health and safety issues repeatedly found in their factory.

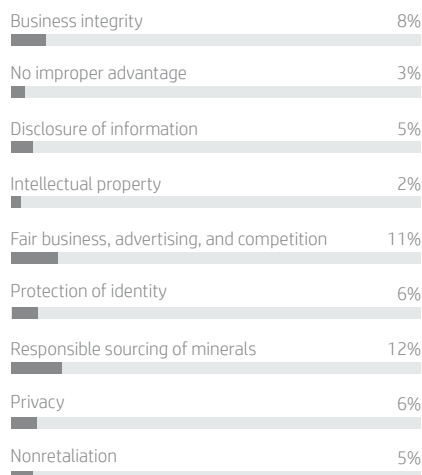
Environmental

In 2016, our suppliers' hazardous substances audit performance improved, with major nonconformance rates dropping to 35% from 41% in 2014. It is crucial that suppliers properly label and store all hazardous substances in their facilities. We understand the impact that hazardous substances may have on worker health and we are working to clarify and strengthen guidance in this area in the EICC VAP protocol.

Major nonconformance rates in storm water management increased from 14% last year to 31% in 2016. This was largely due to the recent introduction to our program of several commodity suppliers that are unfamiliar with this guidance. We will focus on this area, since effective storm water management is essential to improving factory resilience and addressing risks related to climate change and extreme weather events.

Ethics

rates of major nonconformances of sites audited



Ethics

Ethics continued to comprise the smallest proportion of major nonconformances, at 6% of the total in 2016. We insist that HP suppliers uphold the highest standards of integrity in all business interactions. We do not tolerate bribery, corruption, extortion, or embezzlement, and we require our suppliers to hold those same expectations for their suppliers. In each ethics category, we require suppliers to prove they have monitoring and enforcement procedures in place.

Management systems

Management systems major nonconformances remained low for most provisions in 2016, indicating relatively strong implementation of SER systems and controls. HP continues to work with suppliers and external partners such as Social Accountability International to improve SER management systems.

Many HP suppliers have monitoring policies in place for their own suppliers, which is in line with our expectations. However, 29% of suppliers audited in 2016 did not demonstrate a commitment to assuring the SER performance of their suppliers, leading to nonconformances in the supplier responsibility category. In 2017, we will train first-tier suppliers to more effectively communicate their own SER expectations to their suppliers, using guidance from the EICC VAP audit protocol.

Management systems

rates of major nonconformances of sites audited



Responsible minerals

Driving progress on conflict-free sourcing

HP shares global concern over the need for responsible mineral sourcing. Any possibility that the sourcing of materials used in our products might be connected to human rights abuses and armed violence is unacceptable. To ensure that our products are made responsibly, in ways that protect workers and communities, we have adopted industry-leading policies and monitoring practices.

Eradicating any connections between our products and armed conflict requires action across a complex, multilayered, global supply chain. We are broadening our approach beyond conflict minerals, to include additional minerals of concern and locations. Expanding markets for responsibly sourced minerals is also a priority for HP and our industry. We collaborate with peers, across industries, and with intermediary supply chain actors to improve global supply chain practices and ensure that conflict-free minerals are widely available.

Conflict minerals

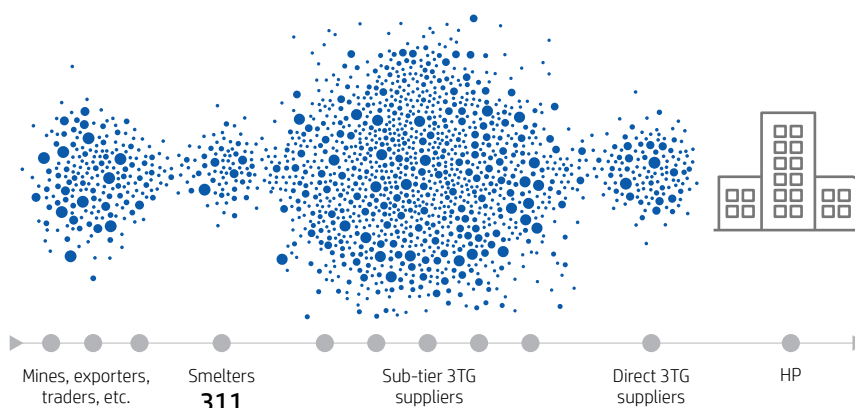
“Conflict minerals” refers to the mineral precursors of the metals tantalum, tin, tungsten, and gold (3TG) as identified in the Securities and Exchange Commission (SEC) rule on conflict mineral disclosure. Revenue from mining these minerals has been widely linked to funding for groups engaged in extreme violence and human rights atrocities. HP

continues to work toward a conflict-free supply chain through rigorous management, supply chain engagement, and industry collaboration.

A multi-actor supply chain

We have the most influence over our direct suppliers, but in the case of trace and precious minerals we must work to affect the practices of those much deeper in the supply chain. HP is an end user of 3TG metals and typically between four and 10 supply chain stages exist between us and the smelters that purchase and process the ore into metals. While conflict minerals are rarely used in large volumes in any one product or by one company, 3TG metals are found in relatively small amounts in virtually all HP electronic products. For this reason, it is important for the IT industry to collectively engage the entire supply chain in efforts to eradicate minerals that may have directly or indirectly supported armed groups.

Conceptualization of HP's 3TG supply chain



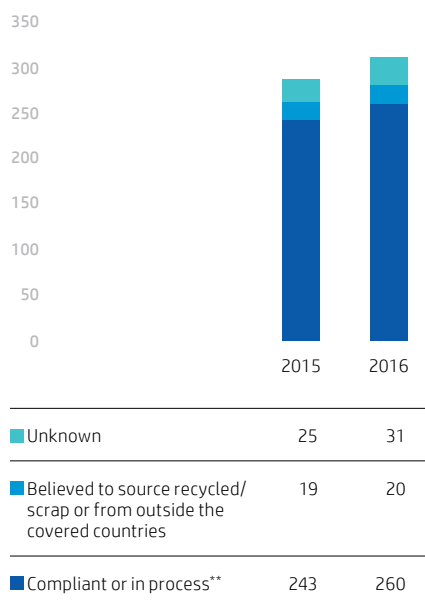
Eliminating conflict-related risks from our supply chain

The greatest risk of conflict minerals entering our supply chain is through smelter ore purchasing practices. HP counters this risk by creating demand for our suppliers to use smelters that participate in the Conflict-Free Sourcing Initiative (CFSI). We aim for our suppliers to source 3TG for HP products only from smelters that comply with CFSI's Conflict-Free Smelter Program (CFSP), which requires a third-party sourcing audit. However, our relatively small use of these metals decreases our influence, so we need all of industry to demand conflict-free 3TG. We will continue to work with our suppliers and across the industry to drive demand for conflict-free sourcing and require our suppliers to work toward removal of smelters that do not participate in a conflict-free audit scheme from our supply chain.

We promote conflict-free minerals in our supply chain by:

- Encouraging smelters that purchase and process mineral ores to undergo third-party sourcing audits.
- Urging our production suppliers of electronic goods containing 3TG ("3TG suppliers") to require their smelters to undergo third-party sourcing audits.
- Supporting multi-stakeholder collaboration to establish secure, conflict-free sources of 3TG ores from the DRC.

Status of all supplier-reported 3TG smelters*



* As of March 2017.

** Smelters or refiners listed by CFSI as currently in the process of becoming CFSP-compliant and/or smelters or refiners compliant with assessment programs: CFSI's CFSP, Responsible Jewellery Council's (RJC) Chain-of-Custody Certification Program, or the London Bullion Market Association's (LBMA) Responsible Gold Programme.

Suppliers

HP sets clear expectations of 3TG suppliers in our [Supply Chain Social and Environmental Responsibility Policy](#), [HP's General Specification for the Environment](#), and the [HP Supplier Code of Conduct](#). We assess these suppliers' responses to the CFSI's Conflict Minerals Reporting Template, which gives companies a common data format for sharing information about 3TG sources with business partners and suppliers up and down their supply chain. We request corrective action from suppliers where needed, and provide them with training materials. If any 3TG supplier reports sourcing from a smelter that triggers one of our potential risk indicators, we work with the supplier to establish whether unverified material is potentially used in HP products. When we identify a risk of this occurring, we request the supplier to remove the smelter from our supply chain.

During calendar year 2016, HP obtained acceptable responses from 3TG production suppliers representing more than 98% of our 3TG production procurement spend.

Smelters

To identify and disclose these smelters and refiners, between January and December 2016 HP surveyed suppliers which contributed material, components, or manufacturing for products containing 3TG. Each smelter or refiner reported was identified in at least one of the CFSP reporting templates we received.

Performance

Our suppliers reported a total of 311 3TG facilities in 2016, of which 260 are compliant with, or in process to become compliant with, an independent assessment program. Of the remaining 3TG facilities that are not participating, we have reason to believe that 20 facilities are sourcing from outside the Covered Countries or are exclusively providing conflict minerals from recycled or scrap sources, leaving 31 3TG facilities with unknown status. All the reported tantalum smelters in our supply chain comply with CFSP, whether or not they source from the DRC and nine neighboring countries identified in the Securities and Exchange Commission (SEC) conflict minerals rule.

Progress toward DRC Conflict-Free

Type of facility	Total	Progress toward DRC Conflict-Free*	Percentage
Tantalum	44	44	100%
Tin	82	75	91%
Tungsten	46	41	89%
Gold	139	120	86%
Total	311	280	90%

* Percentage of total 3TG facilities reported to HP that were either Conflict-Free Smelter Program compliant or in process to become compliant, and/or that we reasonably believe exclusively source conflict minerals from recycled or scrap sources or from outside of the Covered Countries (as of April 2017).

SEC conflicts minerals report

In May 2017, HP filed its Conflict Minerals Report and Form SD with the U.S. SEC disclosing HP's due diligence efforts and results with respect to necessary conflict minerals contained in HP products. Development International [recognized HP's 2016 submission](#) as tied for the best in all sectors, due to its quality and thoroughness. See [HP's SEC Conflict Minerals Report](#).

Other regions and minerals

HP is committed to responsibly sourcing all minerals used in our products, and supporting the workers and communities that deliver those products for us. Learning from our experience related to conflict minerals sourcing from the DRC, we will expand our monitoring and supplier engagement activities to 3TG minerals from all regions, as well as other minerals linked to social and human rights risks.

This expanded approach is due in part to the EU Conflict Minerals Regulation, formally approved in 2017, which covers EU imports of 3TG minerals from all regions of the world. This broadens the scope of mineral regulations beyond the DRC and surrounding countries as covered by the U.S. Dodd-Frank Act. The regulation will require all large EU 3TG metal importers and smelters within the EU to conduct due diligence and become "responsible importers" consistent with the OECD Due Diligence Guidance. Although HP is not within the scope of this regulation, we are aligning our policy and approach and preparing to support our customers' requirements consistent with this regulation.

Beyond 3TG, in 2016 we expanded due diligence to include cobalt, which has been linked to human rights abuses, labor issues, and exploitation. HP is working with others in our supply chain to address child labor risks in the cobalt supply chain through the [Responsible Cobalt Initiative](#). See [Human rights](#) for more information.

Multi-stakeholder initiatives

Sourcing minerals responsibly requires collaboration among many stakeholders globally. HP works with businesses, nongovernmental organizations (NGOs), government agencies, and our extensive network of production suppliers to meet this challenge.

We often advocate for leadership on this issue in various external forums. In 2016, our global program manager presented at the UN Forum for Business and Human Rights on HP's approach to conflict minerals sourcing and the lessons that can be applied to similar supply chains. Through CFSI, we helped to develop and share trainings, templates, and white papers to build the capabilities of the IT industry and beyond.

We also expanded our collaborative efforts beyond DRC conflict minerals, joining the Responsible Cobalt Initiative, the Responsible Raw Materials Initiative, and the European Partnership for Responsible Minerals. Other prominent joint initiatives in which we played an active role included [IDH's Indonesian Tin Working Group](#), [Kemet Partnership for Social and Economic Sustainability](#), [Public-Private Alliance for Responsible Minerals Trade](#), [Responsible Minerals Multi-Stakeholder Network](#), and [Solutions for Hope project](#).

Supplier diversity

Promoting diversity through our purchasing decisions

At HP, diversity is a business imperative. We invest in improving representation by minorities and women within our supply chain and encourage diversity in suppliers' own workforces. Just like our [employees](#), diverse suppliers bring unique experiences and perspectives that strengthen our business, support innovation in our supply chain, and enhance local economies.

Leading industry initiatives

This year, we launched two leading initiatives to improve the diversity of suppliers' own workforces. We supported a resolution by the [American Bar Association](#) urging legal service providers to expand opportunities for diverse attorneys. Our chief legal officer (CLO) and her counterparts at several other companies asked the CLOs of every Fortune 1000 company to standardize the collection of diversity data from legal service providers, to better support purchasing decisions that advance diversity. Further, in early 2017, we informed our outside law firms that they would be subject to a "diversity holdback" of up to 10% of fees if they fail to meet or exceed our diverse staffing requirements.

In 2016, we also gave every advertising and PR agency we work with one year to increase minority and female representation in creative leadership and key strategy positions that serve HP. We will reevaluate our relationship with companies that do not meet this requirement. To help our agencies succeed, we are collaborating with them on a benchmark diversity scorecard.

#FREETHEBID

HP is one of five companies, and the only one in IT, to work with [FreeTheBid.com](#) and pledge to give a voice to women in advertising

Small and diverse suppliers

HP encourages small businesses and companies owned by women, minorities, veterans, aboriginal or indigenous people, and lesbian, gay, bisexual, and transgender (LGBTQ) individuals to compete for our business. Our Global Supplier Diversity Office oversees our programs to recruit, onboard, and support diverse suppliers. In 2016, HP had supplier diversity programs and partnerships in South Africa and the United States.

To grow our business with small, diverse suppliers, HP is developing a supplier development program in the United States. Through this program, HP will provide opportunities such as business management training, business matchmaking, community engagement events, and collaborative initiatives with larger HP suppliers. We will work with the [National Minority Supplier Development Council](#) and [Women's Business Enterprise National Council](#) to support these efforts. We are also assessing requirements in Australia, Canada, Ireland, South Africa, and the UK to better position HP to support supplier diversity in those countries in the coming years.

In 2016, HP's U.S. spend with small businesses was \$1.065 billion. Spend on U.S.-based minority-owned and women-owned businesses totaled \$349 million during the year.⁴ See [Data](#) for more detail. Moving forward, HP will focus on driving more business to small and diverse suppliers in the United States, as well as businesses that support black empowerment in South Africa.



Employees

Our people drive HP's reinvention, every day

Every day, HP's 49,000 employees¹ collaborate to shape the company and bring our vision to life. In 2016, in our first year as a new company, our employees' expertise, passion, and energy have helped to redefine HP's culture and reaffirm our purpose. We are committed to fostering a diverse and inclusive workplace that attracts exceptional talent, and to supporting our employees to succeed at all levels. Together, we are moving forward, renewed and reinvigorated to create the breakthrough technologies that will continue to improve the lives of everyone, everywhere.

Our priorities

Reinvent the standard for diversity

- Be the industry leader
- Drive our strategy to Belong, Innovate, and Grow
- Embed the value of diversity internally and externally
- Foster cultural competence and inclusion at all levels

Reinvent our culture

- Connect employees at all levels to our vision, strategy, and culture, so we can deliver sustainable business results
- Strengthen employee pride in HP innovation and solutions
- Drive improvement in employee engagement through global and local programs and forums

Implement talent and leadership programs

- Build a talent and leadership pipeline that supports diversity and inclusion
- Develop leadership aligned with our culture for all levels of employees
- Reinforce innovation, risk-taking, and continuous development

2016 highlights

Most diverse

board of directors among U.S. technology companies

4,600+

employees contributed over 54,800 hours of volunteer time in 33 countries, valued at \$1.4 million

1.1 million

training hours completed by employees, an average of 21 hours per employee

Diversity and inclusion

Diversity is a cornerstone of innovation

“HP Inc. creates technology for everyone, everywhere, making diversity and inclusion a vital part of who we are. Diversity and inclusion matters not only in the communities where we live and work, but also to the bottom line of our business.”

Dion Weisler, President and Chief Executive Officer, HP Inc.

As we pursue our mission—to engineer experiences that amaze—each HP employee brings unique experiences and perspectives to bear on HP’s capabilities and expertise. This helps us design and deliver products and services that are valued by our customers globally.

HP’s commitment to diversity and inclusion is deep and unwavering and our approach is broad, encompassing our employees, suppliers, partners, and communities. HP has long been one of the most transparent technology companies and a recognized industry leader in diversity and inclusion. Strong policies guide our actions, and we continue to innovate new ways to increase diversity, foster inclusion, and impact business results. HP is dedicated to driving progress from the boardroom to our operations worldwide.

We aim to make HP the destination for women and underrepresented groups in technology. It’s a priority for HP—both within our company and among our partners. To make a lasting impact, we are reinventing the standard for diversity. This shapes how our employees at all levels impact industry norms, partner with each other, make hiring and promotion decisions, and serve their communities.

Our leadership

HP’s commitment to diversity begins at the highest level, with our Board of Directors. Our board includes five women and five minority members with three underrepresented minorities—the most diverse board among U.S. technology companies.² Our chief diversity officer leads efforts to advance our diversity and inclusion (D&I) strategy and to strengthen our diverse culture, above and beyond our rigorous [diversity and inclusion policies](#). HP’s new Global Diversity Advisory Board (see below) provides additional vision, support, and employee engagement.

In 2016, we launched the first HP Global Diversity Advisory Board (GDAB) to drive strategic initiatives across the company and increased accountability at all levels. This board of executive members brings perspectives from a range of organizations, roles, and geographies. Its initial priority was to understand unique regional and business conditions and establish plans to address diversity and inclusion needs locally.

Our Belong, Innovate, and Grow strategy

In 2016, we introduced our global Belong, Innovate, and Grow (BIG) strategy to support an inclusive culture, leverage diversity of thought and perspectives to fuel innovation, and impact our bottom line by embedding diversity and inclusion across the company. Highlights from 2016 included:

- **Raising gender equity in management:** During the year, we increased representation of women in top marketing positions at HP to 50%.
- **Improving diversity in our marketing partnerships and diversifying legal service providers:** See [Supplier diversity](#) for details.
- **Growing a diverse talent pipeline:** Strong relationships with organizations such as the ACM Richard Tapia Celebration of Diversity in Computing, BreakLine, GSVlabs Women’s Reboot, the National Action Council for Minorities in Engineering (NACME), Out & Equal, and The Consortium help us target diverse recruitment.
- **Demonstrating the business benefits of strong D&I policies and programs:** Indicators included [employee retention and engagement](#).



HP leaders (Anneliese Olson, Mithra Vankipuram, Kim Rivera, Lesley Slaton Brown, and Antonio Lucio) take part in HP’s International Women’s Week activities.

To foster an inclusive workplace, HP's global standards are often higher than local legal requirements. We do not tolerate discrimination or harassment under any circumstance. Employees can report suspected breaches to their manager, the next level of management, Human Resources, or the [Ethics and Compliance Office](#).

Training employees at all levels

We foster a respectful, open, and inclusive work culture by equipping employees with the tools and language they need to recognize their own implicit biases and respond in productive ways. In 2016, we launched our Unconscious Bias: Unleashing Innovation training program. Twenty-two instructors were certified globally to facilitate team sessions, and more than 500 employees completed the program. In 2017, training will continue for human resources personnel and HP managers globally. We also trained six facilitators to collaborate with HP business leaders to heighten cultural competency in our offices worldwide. More than 2,000 HP employees used our cultural competency training and online resources in the past year.

Standing up for diversity

In early 2017, we were among more than 120 mostly technology companies that signed an amicus brief opposing a U.S. executive order on immigration. In doing so, we demonstrated support for the contributions of immigrants to the United States, and for all HP employees and their families as a force of innovation.

When four U.S. states—Mississippi, Missouri, North Carolina, and Tennessee—passed legislation in 2016 discriminating against the LGBTQ community, HP spoke out in opposition. In North Carolina, we also opposed HB2, a law that forces transgender people to deny, disclaim, and conceal their gender identity, particularly by using single-sex restroom facilities on state or local government property. We joined nearly 200 companies in signing a [Human Rights Campaign letter](#) opposing laws that eliminate existing municipal nondiscrimination protections for LGBTQ people. Such efforts run counter to our values and diminish a state's ability to attract businesses.

Sharing our culture and skills with communities

HP's Employee Resource Groups (ERGs) foster a positive, collaborative work environment by bringing together people with shared interests and experiences. Seventy-six active chapters focus on women, veterans, people with disabilities, generations, and Pan Asian, African American, Hispanic, and LGBTQ employees.

Our global network of ERGs also engages colleagues and communities on diversity and inclusion. In 2016, 29,000 employees across 19 countries participated in 600 ERG activities. For example:

- Attending recruiting events with national partners including the Society of Hispanic Professional Engineers, National Black Engineers, and the American Indian Science and Engineering Society.
- HP employees around the world volunteered their time to support [Hour of Code](#) activities in local communities, advancing science, technology, engineering, and math (STEM) education for girls and underrepresented minorities.



HP Pride event in Boise, Idaho, United States.

- Promoting our inaugural International Women's Week, celebrating HP women's contributions at site events around the world and through webcasts and employee profiles.
- Participating in pride parades, the AIDS Walk San Francisco, the Lavender Law Conference & Career Fair, and the San Diego Hillcrest Youth Center's Rainbow Prom for LGBTQ teens.
- Honoring our U.S. employees with awareness campaigns, events, speakers, and panels for Black History Month, National Hispanic Heritage Month, and Native American Heritage Month.

Women in IT

We engage our communities to further STEM education for girls and minorities through our partnerships with Anita Borg Institute, Black Women and Girls in Computing, the National Action Council for Minorities in Engineering (NACME), the National Center for Women and Information Technology (NCWIT), ReBoot Career Accelerator for Women, and the Silicon Valley Young Women's Leadership Summit.

Recognition

In 2016, we received recognition as a Best Company by *Working Mother* magazine in the United States (for the 26th consecutive year) and in India and Mexico (on the inaugural lists in those countries). HP was ranked as a Top Company for Women Technologists by Anita Borg Institute, and earned a perfect score of 100 from both the Human Rights Campaign Corporate Equality Index and the Disability Equality Index.

Workforce demographics

View detailed HP employee demographics [data](#) from 2016. To view breakdowns of the HP U.S. workforce by gender, ethnicity, and job category, see the company's [2016 U.S. EEO-1 form](#).

Engaging employees

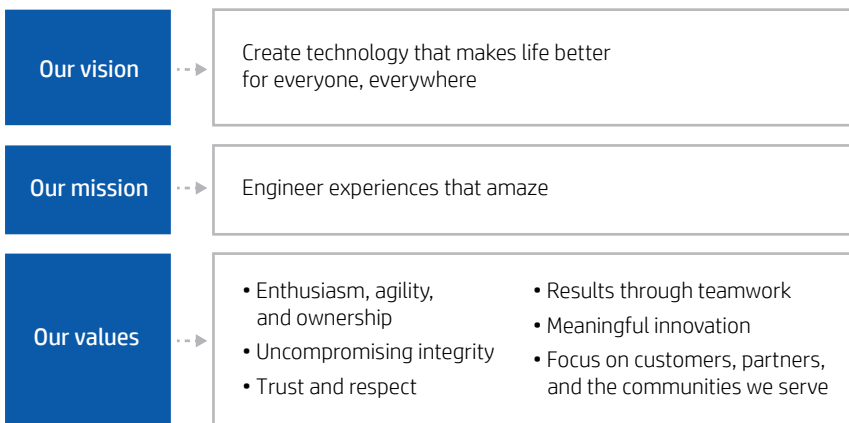
Helping our people thrive at work and in our communities

Our business depends on innovation, and innovation requires teamwork. To engage and inspire our talented professionals, we offer employees the opportunity to build lasting and fulfilling careers and to make meaningful connections with each other and our communities. We regularly collect employee feedback to improve the employee experience and strengthen our culture.

We bring our culture to life by drawing on our past as a groundbreaking technology company and embracing a spirit of reinvention as we look to the future. Our culture is united by our vision, mission, and values, and embodied in the results we pursue.

\$500,000

Committed in scholarships to the University of Houston for top students who are the first in their families to attend college



Employee insight survey

We regularly collect employee feedback so we can improve the employee experience. In 2016, we launched our new, companywide Voice, Insight, Action process, through which employees take a survey to provide input on their HP experience. Globally, 90% of employees participated. Results help managers understand trends and priorities and develop global plans to address survey insights. We then provide companywide quarterly updates on progress. Our objective for 2017 is to achieve a 5% year-over-year improvement in employee engagement. We plan to advance the following engagement areas through 2018:

- Improving the way we work:** Enhance tools and processes that increase employee productivity and effectiveness.
- Developing our people:** Bolster learning and development programs that further career paths.
- Building our future:** Drive employee alignment with HP's strategy as they shape our culture, deliver on our mission, and achieve our vision.

Recognition

In 2016, 79% of employees were recognized for making a positive business impact and 51% were acknowledged by a colleague for demonstrating strong teamwork and workplace values. During the year, we launched the EZ Thanks app in 12 languages, allowing HP employees to recognize colleagues from mobile devices. We'll continue to ensure that our recognition tools and programs are strategically aligned with HP's reinvention journey and that they reinforce our values, behaviors, and actions.



HP employee Mary Kate Howard demonstrated a desktop teardown for underrepresented youth in Houston, Texas, United States.

Community involvement

Volunteerism is a cornerstone of HP's strong reputation as an employer and corporate citizen, helping us attract and retain great people and strengthen relationships with our local communities. A global network of nearly 70 sustainability innovation leads helps drive our volunteering strategy. They meet monthly to coordinate a wide range of group volunteering opportunities across the company.



HP employee volunteers from Lima, Peru, used bubbles as a fun way to teach STEM concepts to girls ages 8-11 at the Mini Academy of Science & Technology after school program.

\$1.4
million
 of value in HP employee
 volunteering contributed in
 2016³

In 2016, we launched the Time Off Community Support Grant program. Individuals can apply for a week of paid time off to volunteer in addition to the four hours of paid time off available to all employees monthly. Nine employees participated in this new program, supporting efforts such as the Nyaka AIDS Orphans Project in Uganda, the Street to School organization in Pakistan, and an initiative to help WWF-Canada identify opportunities to grow its volunteering program. Combined with other volunteering opportunities, more than 4,600 employees contributed over 54,800 hours in 33 countries during the year.

When employees volunteer their expertise and skills, they bring added value to nonprofit organizations while developing professionally. Eleven percent of the hours volunteered globally in 2016 were skills-based, in areas such as education, youth development, and animal welfare. In 2017, we are working to increase employee involvement in volunteering, particularly during the Global Month of Service.

Employees also donated \$1.13 million in cash to qualifying organizations during 2016 through our HP Inspires Giving program. The HP Foundation contributed \$1.02 million in matching funds. Moving forward, we'll continue to expand the program's reach and participation globally.

Helping teach the next generation how to code

Understanding technology provides students with valuable educational and professional pathways. HP employees volunteer with two computer science organizations that reach underserved communities, particularly young women, and help HP identify future possible talent. In 2016, more than 1,000 HP volunteers, from 27 sites, participated in [Hour of Code](#) in 140 schools and communities around the globe, teaching 17,000 underserved K-12 students valuable computer science skills.

HP also sponsors [CodeWars](#), a global competition that challenges high school teams from around the world to tackle 20 programming problems in just three hours. In 2016, HP volunteers supported 1,650 students in Spain, Taiwan, the United Kingdom, and the United States in the competition.

Talent development

Building a pipeline of engaged leaders

Our continued success relies on developing and maintaining a strong pipeline of diverse, talented, and informed leaders. To help our employees learn and grow, we provide face-to-face and virtual training, trainee programs, mentoring, and coaching. In 2016, employees completed over 1 million training hours in learning and development, an average of 21 hours per person.

We also offer engaging digital and mobile channels that support learning and development. Our new state-of-the-art social learning platform, HP Brain Candy, aggregates educational articles, videos, and courses from across the web into a central portal, available to all employees anytime. Learning can be self-directed or follow a set curriculum track. Employees can share, follow, and comment on content, and join communities with curated content. As of November 2016, 40% of employees were active on Brain Candy, engaging with 40,000 content items including 900 business and technology courses.

In 2016, we shifted our performance review process to include frequent, consistent, and engaging conversations between employees and managers. Our aim is to advance employees' skills faster than in traditional annual review cycles. As a part of this process, managers focus on what employees accomplished and how they reached those achievements, to reinforce positive habits. With support from human resources, leaders now provide rewards based on their judgment, rather than a rating system. In 2016, 97% of eligible employees received performance input.

Compensation and benefits

Attracting and retaining top talent

Rewarding employees' hard work drives engagement and performance. HP sets salaries, bonuses, and other incentives that are performance-based and market-competitive. We complete at least one annual performance review cycle for pay and benefits globally. See [Talent development](#) for information about performance reviews.

Employees are eligible for a range of benefits everywhere we operate. In 2016, depending on location, these included:

- Retirement and savings plans
- Increased debt assistance for student loans
- Time off
 - Two flexible personal days off in addition to HP's standard holiday schedule
 - Parental leave up to four weeks
 - Adoption leave up to eight weeks
- Health and wellness plans
- Income-protection insurance covering risks from injury or illness
- Flexible working arrangements
- Employee stock purchasing plan

Wellness

Taking a holistic approach to employee wellness

The physical, emotional, and financial well-being of our employees is vital to HP's success. Program highlights from 2016 included:

- **Physical health:** Working in teams, 15,000 employees around the world walked nearly 5 billion steps in our annual Global Wellness Challenge. A third of participants lost weight and 94% indicated they would take part again. HP received the *MarCom Platinum Award* for marketing the campaign. Our Power of Prevention program provided on-site cancer prevention screenings and early detection, as well as online support services. During the year, employees from 42 countries participated and through the program we provided more than 4,700 skin cancer screenings in the United States alone.
- **Stress management and emotional resilience:** To help employees manage stress we launched our *Reset. Rethink. Resilient.* online electronic campaign and resources.

- **Financial wellness:** In summer 2016, we hosted a virtual Q&A with an expert panel of financial advisors and investors attended by 1,470 employees.

In recognition of our efforts in this area, we received the *Health Leadership for Business Excellence Award* from the nonprofit National Business Group on Health.

In 2017, we will roll out a comprehensive online well-being platform with healthy habit tracking tools and fun challenges to help motivate our employees and families to make positive changes.

Health and safety

A safe and healthy workplace, by design

HP's offices, production facilities, warehouses, and labs are designed to keep employees safe, healthy, and productive. We focus on the challenges most relevant to our business operations—slips, trips, and falls, and ergonomic issues.

Improving our best practice environmental, health, and safety (EHS) management processes is an ongoing effort. In 2016, we maintained ISO 14001 certification across our facilities. Every HP site follows our global [Environment, Health, and Safety Policy](#) and management system. The latter aligns with two leading standards:

- ANZI Z10, American National Standards Institute
- ILO-OSH 2001, International Labour Organization

All HP facilities employ EHS personnel, and a Global EHS team provides oversight. We monitor changes in EHS legislation and standardize how we assess risk and meet legal requirements everywhere we operate. Our high-tech manufacturing facilities in Corvallis, Oregon, United States; Leixlip, Ireland; Singapore; and Kiryat Gat, Israel, carry the greatest health and safety risks and are a focus for the EHS team.

Engaging employees about relevant policies, processes, and regulatory compliance issues is central to our EHS strategy. In 2016, over 2,900 employees, including managers, participated in 158 instructor-led trainings, and more than 13,600 employees enrolled in 85 web-based trainings on EHS. We also notified employees on 18 different health advisories, including Zika, Ebola, and measles.

We use a health and safety data-collection and tracking system to monitor injury trends regionally and globally, and to report on our performance. Across our operations, we maintained low accident and injury rates in 2016, with a global lost workday case rate of 0.16 and a recordable incidence rate of 0.22. The top three categories of work-related injuries at HP related to slips, trips, and falls (34% of lost workdays), automobile accidents (26%), and struck by/against/cut by incidents (22%). We perform accident investigations and take preventative action to prevent future occurrences.

View [Data](#) for more detail.



Empowering people everywhere to thrive

Technology can open doors to abundant opportunity. But for a large portion of society, participating in a rapidly evolving and connected world remains out of reach. Ensuring that people have access to computing and can optimize its potential is essential to building an inclusive economy where everyone can thrive.

Our priorities

Accelerate economic opportunities

- Enable people at all levels to build skills to improve their employability
- Provide free, self-paced online business and technology skills courses
- Innovate ways of doing business to open new market opportunities and drive inclusion
- Empower employees to make loans to micro-entrepreneurs

Advance quality learning and digital literacy

- Reinvent the classroom to engage students, empower educators, and build vibrant communities
- Deliver connected learning solutions to people who are displaced, isolated, or living in underserved communities
- Advise on national human capital development strategies enabled by technology
- Help people develop relevant skills to participate in the digital economy

Assist organizations and communities in need

- Respond to disasters when they strike
- Share time and skills to build community resilience
- Apply resources to advance the causes our people care about most

2016 highlights

1,250+

jobs generated based on skills gained in the first three years of the Mashrou3i project in Tunisia¹

60

schools in 11 countries received state-of-the-art HP Learning Studios

\$675,000

spent on disaster relief and preparedness

Total HP social investments in 2016 equaled \$4.38 million in value²
View [Data](#) for more detail.

Our goal

100 million

Enable better learning outcomes for 100 million people by 2025, since the beginning of 2015

HP uses its expertise and resources to create meaningful and measurable economic, educational, and social outcomes globally. We invest in programs and provide technology solutions that meet students where they are, and take them where they want to go. We bring quality learning and digital literacy to people of all levels and abilities, to improve their skills and employability. When natural disasters destabilize communities, we work with partners to speed recovery and reconnect vital networks. Complementing company and [HP Foundation](#)³ giving, our employees [donate time, expertise, and money](#) to support the communities where we live and work.

HP has set [bold goals](#) for its business and community investment initiatives related to education. To scale and better understand our impact, we work with nongovernmental organizations (NGOs) and public and private sector partners around the world.

Entrepreneurship

Accelerate economic opportunities

In low-income, displaced, and often remote communities, many people lack the technology and training to access the benefits of the global economy. By reinventing job-skills training, and providing educational opportunities, HP helps students, the unemployed, small businesses, and would-be entrepreneurs gain practical business and IT skills and connect to new economic opportunities.

HP LIFE

To bridge the “digital divide” we provide core business and IT skills free of charge for start-ups, students, and small businesses through HP LIFE (Learning Initiative for Entrepreneurs), a global e-learning program of the HP Foundation. HP LIFE is available in seven languages and offers 27 e-learning courses with 24/7 access, ranging from marketing to finance and operations basics. Our target is to empower another 1 million aspiring entrepreneurs by enrolling them in HP LIFE between 2015 and 2025, contributing to our overall goal to enable better learning outcomes for 100 million people by 2025. During 2016, 53,000 people enrolled in the program.

The HP Foundation partners with organizations such as Indiana University, U.S. Agency for International Development (USAID), and United Nations Industrial Development Organization (UNIDO) to bring HP LIFE to underserved communities, helping would-be entrepreneurs unlock their potential. These initiatives employ local educators in face-to-face skills training in low and middle income countries.

Tunisia

In 2016, we completed the first three-year phase of the Mashrou3i skills and job creation project, a partnership with the USAID, UNIDO, and the Italian Development Cooperation. We provided free access to computing and printing, and more than 13,000 users enrolled in HP LIFE courses, resulting in the creation of more than 1,250 jobs and 160 startup businesses.⁴

In January 2017, we launched the second phase of this public-private partnership extending the project for another five years and covering 14 vulnerable governorates of Tunisia. A combined \$14 million will be invested by USAID, UNIDO, the Italian Development Cooperation, and the HP Foundation to support the program and provide direct support to aspiring and existing entrepreneurs through training courses, business coaching, and technical assistance.

631,000+

HP LIFE users across 200 countries and territories since 2012



HP LIFE students at International Medical Corps Livelihoods Center for refugees in Turkey.

Myanmar

As Myanmar's economy becomes more open, we are helping provide physical learning centers where small business owners can develop entrepreneurship and IT skills, and business school educators can enhance their capabilities. Funding for the ADEPT (Advancement and Development through Entrepreneurship Programs and Training) program comes from HP, USAID, Indiana University's Kelley School of Business, BSR, and VinaCapital's Lotus Impact fund. In 2016, five new learning centers opened, each equipped with HP technology and HP LIFE. Through October 2016, more than 2,800 students, entrepreneurs, aspiring entrepreneurs, job seekers, and small business owners attended the 13 HP LIFE centers nationwide.

To build on HP LIFE's global success, we will launch new partnerships in 2017 that further the program's reach and draw on employee expertise to update and expand course offerings.

Sustainable opportunities in Haiti



A collector gathers and sorts bottles for recycling in Haiti.

In 2016, [HP committed to improve conditions at the Truitier landfill in Haiti](#) over a three-year period. In partnership with Thread International, Timberland, Team Tassy, and ACOP (Association des Collecteurs des Objets en Plastique), we are driving progress toward a more circular and inclusive economy.

More than 300 children currently collect recyclable materials from the Truitier landfill. These children and their families are exposed daily to hazardous working conditions. This joint initiative aims to improve the lives of the children by providing them with educational opportunities, including more than 200 scholarships, as well as full access to medical care and health and safety trainings. Additionally, commitment partners will provide job training for the adult family members of the children who are also working in the landfill, and will invest over \$150,000 in entrepreneurs, microenterprises, and/or small-to-medium enterprises in targeted neighborhoods.

As part of this commitment, HP is purchasing recycled plastic made with raw materials collected in Haiti, for use in our [closed loop ink cartridge recycling program](#). By opening a new market opportunity, generating a steady revenue stream, and partnering to improve conditions for workers, HP is helping to create jobs and bring dignity to the collectors of recyclables in Haiti—all while creating sustainable ink cartridges.

Matter to a Million

About 2.5 billion people in developing countries, many of whom dream of opening a small business, lack access to mainstream banking services. [Kiva](#) is a nonprofit microlender that connects low-income entrepreneurs to capital to buy business essentials such as tools, supplies, and livestock. Through Matter to a Million, a global engagement program, the HP Foundation provides each HP employee a \$25 credit annually to loan to Kiva borrowers. In 2016, 46% of HP employees took part, generating more than 45,300 loans totaling \$1.1 million.

Education

Advance quality learning and digital inclusion

A quality education opens doors to new ideas and better opportunities. HP is improving access to quality education and lifelong learning for all in the classroom and beyond, serving communities that need the most support. We deliver flexible, connected learning solutions and help educators implement IT in ways that can transform education. More than 9.5 million students and adult learners have benefited from HP's efforts to improve the quality of learning and digital literacy since the beginning of 2015, with the aim to enable better learning outcomes for 100 million people by 2025.

Reinvent the Classroom with HP Learning Studios



HP Sprout Pro.

Improving education outcomes starts by reinventing the classroom in ways that engage students, empower educators, and build strong and vibrant communities. HP is driving innovative, experiential learning at 60 schools in Australia, Canada, New Zealand, the United States, and seven countries in Europe. HP's Reinvent the Classroom is a multimillion-dollar initiative that provides immersive, technology-driven learning experiences for students across five continents in partnership with Microsoft and nonprofit [Digital Promise](#).

Schools or community sites receive an HP Learning Studio that engages students in science, technology, engineering, and math (STEM), design thinking, and social entrepreneurship. Learning Studios are outfitted with HP's innovative solutions, including the Sprout Pro, PageWide printer, and HP Education Edition PCs, as well as a Dremel 3D printer. Teacher-training resources, including content and curriculum, supplement the technology to develop students' inquiry, collaboration, and critical thinking skills. HP also created a global community for teachers to exchange best practices, lesson plans, and student work.

Based on interim research about students' experience in the program:

- 75% reported that they kept working on assignments beyond what was required, tried solving a problem more than once, and/or kept working on a tough problem until they solved it.
- 69% reported choosing to collaborate with classmates they do not usually work with and helping classmates brainstorm.
- 66% reported setting goals, seeking feedback, and taking risks.
- 54% reported increased confidence in their "making" abilities, such as creating digital 3D models and assembling objects without instructions.

HP is also providing [six HP Learning Studios](#) in the Middle East to empower young refugees.

Delivering quality education for all

The potential for technology to deliver quality learning and transform education outcomes for students is substantial. HP's National Education Technology Assessment (NETA) framework enables governments globally to understand and evaluate the impact of reform on educational outcomes.

“Education is a core market
 for our technology, but it's also
 vital to powering the next
 generation of inventors,
 leaders, and future employees.
 The opportunities provided
 by a quality education should
 not be limited by location
 or circumstance—everyone,
 everywhere deserves the
 right to learn and achieve
 their potential.”

Gus Schmedlen, HP Vice President
 of Worldwide Education

Through NETA, HP provides consulting support to ministries of education, finance, and economic development. Through 2016, our education solutions team has prepared several nationwide education technology readiness assessments and guidance reports for countries including Ecuador, Hungary, Indonesia, Oman, Peru, Rwanda, and the United States, reaching over 100,000 stakeholders.

To conduct these assessments, HP education experts embed in schools, along with qualified nonprofit third-party observers. We then produce recommendations that help shape educational systems and improve outcomes in these countries. Underpinning our recommendations is the HP Learning, Economic, and Social Index (LESI). A proprietary, transnational benchmark, LESI tracks over 35,000 data points across educational, economic, and social domains. HP's macro-evaluation and hyperlocal insights provide a powerful, actionable assessment of a nation's human capital development potential.

HP World on Wheels



Students participate in HP World on Wheels program.

Remote regions of emerging countries are often left behind in the connected global economy. Providing people with access to learning that boosts economic opportunity and employability requires technology combined with innovative thinking. In November 2016, HP committed to build and deploy 48 mobile, self-contained, Internet-enabled digital inclusion and learning labs to help bridge this gap in rural India. The HP World on Wheels program will support digital literacy, provide education programming and entrepreneurship training, and connect students, entrepreneurs, and community members to government programs. Each 20-seat mobile learning lab is equipped with HP computers and printers, software suites, and e-learning tools, and is powered by high-efficiency solar panels and battery packs that store enough energy to sustain the lab, even on cloudy or rainy days. The program supports the Indian government's Digital India initiative and aims to reach 6,400 Indian villages and impact more than 15 million people over the next six years.

Empowering young refugees

“The refugee community is full of untapped potential, but is challenged with growing those talents and skills due to lack of access to technology and the digital world. HP is empowering refugees to build a better, more prosperous life through access to quality education and employment opportunities.”

Nate Hurst, Chief Sustainability and Social Impact Officer, HP

HP has long been committed to helping displaced individuals improve their lives through technology, including by funding and providing technology to dozens of Community Technology Access centers run by the United Nations High Commissioner for Refugees in refugee camps across 26 countries.

In 2016, we were among the first 15 companies to answer the White House Call to Action to aid refugees in the United States and abroad through new, meaningful commitments that have a lasting impact. HP will empower youth and adult refugees by providing access to learning and skills that improve their employment prospects. As part of our commitment, we will provide refugee youth in the Middle East with tools to learn business and IT skills in partnership with Digital Promise, the Global Business Coalition for Education, Intel, and Microsoft.

Committed technology will include six state-of-the-art [Learning Studios](#) powered by HP Education Edition PCs and a suite of software designed for the needs of displaced students. Adults will develop skills through [HP LIFE's](#) (a global e-learning program of the HP Foundation) innovative curriculum and teacher training services.

During 2016, we also supported refugees by providing HP technology and HP LIFE training resources to the International Medical Corps' Livelihoods Center in Istanbul, Turkey.

In addition, we sponsor the Girls Truth Seekers Education Project, which enables Syrian refugee girls living in countries that border their homeland to attend virtual, online English classes and connect with Girl Scouts based in the Washington D.C. area. This program is a partnership with the Global Alliance Institute and Girl Scouts Nation's Capital.

Disaster recovery and volunteerism

Assist organizations and communities in need

When disasters strike, we are there to assist. HP, our employees, and the HP Foundation together provide financial support for affected communities, working with expert partners including the [American Red Cross](#) and the [Silicon Valley Community Foundation](#). In 2016, the HP Foundation provided \$425,000 to assist with disaster relief and recovery efforts related to earthquakes, flooding, terrorist attack, and other emergencies in France, Italy, Romania, the United States, and other locations. We also funded \$250,000 in disaster preparedness initiatives. See [Data](#) for more detail.

With a reach spanning many countries around the world, our employees volunteer their time and skills to strengthen communities where we live and work. From teaching young women to code in the United States, to supporting AIDS orphans in Uganda, more than 4,600 employees contributed over 54,800 hours to local efforts in 2016. See [Engaging employees](#) for more detail.

Data

Supply chain responsibility*

	2016
Suppliers publishing sustainability reports using the GRI framework [% of production supplier spend]	86%
Capability building	
Number of capability-building programs	14
Workers and managers reached through capability-building programs**	45,700
Workers' rights	
Suppliers' employees working fewer than 60 hours per week on average*** [%]	89%
Suppliers' employees receiving at least one day of rest each seven-day workweek*** [%]	96%
Suppliers in China with student workers representing 20% or less of total employees*** [%]	98%
Zero-tolerance audit findings (immediate action required) related to the ILO Declaration on Fundamental Principles and Rights at Work: freedom of association; forced, bonded, or indentured labor; child labor; or discrimination†	2
Zero-tolerance audit findings (immediate action required) related to occupational safety, emergency preparedness, or industrial hygiene†	2
Workers at sites audited†† [total]	96,400
SER audits and assessments conducted [total]	
Initial audits	58
Follow-up audits	67
Full reaudits	30
Assessments	29
Rates of major nonconformance of sites audited (see below)	

* Data in this table is specific to production suppliers, except SER audits conducted, which also includes 23 initial audits and 9 follow-up audits of nonproduction suppliers. The results of those audits are not included in the nonconformance data in this section or in the total number of workers at sites audited.

** With the exception of train-the-trainer programs, HP only accounts for workers and managers directly reached by our capability-building programs. Number of workers and managers reached each year depends on the programs executed; some programs address issues broadly across suppliers and workers; other programs focus more narrowly on individual supplier sites or specific vulnerable worker groups.

*** Based on production-line workers at final assembly and select commodity sites participating in the HP KPI program. We continue to expand the list of suppliers in the KPI program based on business risk, country risk, and identified nonconformances.

† See [page B2](#) for detail.

†† Number of workers as of the date of the site visit per the production and nonproduction initial supplier audit reports.

Rates of major nonconformance of sites audited, 2016*				
HP Supplier Code of Conduct category/provision	Global	Greater China	Asia Pacific	Americas
Labor				
Freely chosen employment management systems	17%	17%	20%	15%
Presence of forced labor	5%	3%	7%	8%
Young worker protection management systems	3%	6%	0%	0%
Presence of child labor	0%	0%	0%	0%
Working hours	63%	81%	40%	46%
Wages and benefits	31%	44%	20%	8%
Humane treatment	2%	0%	7%	0%
Nondiscrimination management systems	23%	22%	27%	15%
Presence of discriminatory practices	6%	6%	13%	0%
Freedom of association	13%	14%	13%	8%
Health and safety				
Occupational safety	45%	58%	20%	38%
Emergency preparedness	58%	67%	33%	69%
Occupational injury and illness	38%	47%	20%	38%
Industrial hygiene	26%	33%	20%	15%
Physically demanding work	12%	11%	13%	15%

Rates of major nonconformance of sites audited, 2016*				
HP Supplier Code of Conduct category/provision	Global	Greater China	Asia Pacific	Americas
Machine safeguarding	11%	14%	7%	8%
Dormitory and canteen	35%	36%	27%	46%
Health and safety communication	6%	6%	7%	8%
Environmental				
Environmental permits and reporting	14%	19%	7%	8%
Pollution prevention and resource reduction	2%	0%	0%	8%
Hazardous substances	35%	39%	27%	38%
Wastewater and solid waste	8%	14%	0%	0%
Air emissions	9%	11%	0%	15%
Storm water management	31%	36%	20%	31%
Energy consumption and GHG emissions	9%	8%	0%	23%
Ethics				
Business integrity	8%	3%	7%	23%
No improper advantage	3%	0%	0%	15%
Disclosure of information	5%	3%	0%	15%
Intellectual property	2%	3%	0%	0%
Fair business, advertising, and competition	11%	8%	13%	15%
Protection of identity	6%	3%	7%	15%
Responsible sourcing of minerals	12%	14%	0%	23%
Privacy	6%	0%	7%	23%
Nonretaliation	5%	0%	7%	15%
Management system				
Company commitment	5%	3%	0%	15%
Management accountability and responsibility	14%	8%	7%	38%
Legal and customer requirements	11%	8%	0%	31%
Risk assessment and risk management	23%	17%	7%	62%
Performance objectives with implementation plan and measures	17%	19%	0%	31%
Training	6%	6%	7%	8%
Communication	8%	0%	13%	23%
Worker feedback and participation	6%	3%	7%	15%
Audits and assessments	17%	8%	13%	46%
Corrective action process	5%	3%	7%	8%
Documentation and records	5%	6%	0%	8%
Supplier responsibility	29%	22%	20%	62%

* Data is from audits of production suppliers; data from assessments is not included. Audit data does not necessarily represent the same supplier sites as the previous year. Results from a single audit in Europe are included in the global totals.

HP's spend with U.S. diverse suppliers* [\$ million]	2016
Small businesses	\$1,065
Minority-owned businesses**	\$190
Women-owned businesses**	\$159
Veteran-owned businesses, service disabled veteran-owned businesses, HUBZone businesses, and others***	\$53

* Figures are for purchases in the United States, Puerto Rico, Canada, Europe, and Asia from U.S.-based businesses.

** Suppliers are categorized as minority-owned or women-owned, not both. These categories include all sizes of businesses.

*** Includes all sizes of business in these categories.

Employees

	2016
Women employees [% of total]	
Americas	34.0%
Asia Pacific and Japan	40.0%
Europe, Middle East, and Africa	37.8%
Worldwide	37.2%
Women managers [% of total]	
Americas	30.4%
Asia Pacific and Japan	24.2%
Europe, Middle East, and Africa	28.0%
Worldwide	28.0%
Global new hires, by gender* [% of total]	
Female	40.9%
Male	58.2%
U.S. new hires, by race** [% of total]	
White	48.0%
All minorities	26.8%
Black	5.3%
Hispanic	6.3%
Asian	10.7%
Native American	0.7%

* Sum of "Female" and "Male" does not equal 100% due to a small number of new hires that did not declare a gender.

** 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" because some people do not declare or do not fall into these categories. For the purpose of this table, those who did not declare were not included in the analysis nor placed into a default classification.

Employees (regular full time and part time) by region and gender, 2016*	Men	Women	Total
Americas	12,531	6,472	19,012
Asia Pacific and Japan	11,090	7,417	18,525
Europe, Middle East, and Africa	6,856	4,192	11,076
Total	30,477	18,081	48,613

* In some cases, the total does not equal the sum of the segments because the gender of some employees is uncategorized.

World workforce by age group, 2016*	% of total*
30 and under	20.4%
31–50	62.5%
51 and over	16.3%

* Sum of age groups does not equal 100% because the age of some employees is uncategorized.

Employees (regular full time and part time) by employment type and gender, 2016*	Women	%	Men	%	Total
Full time					
Executives	75	25.9%	215	74.1%	290
Directors	265	27.5%	698	72.4%	964
Managers	1,212	27.9%	3,130	72.1%	4,343
Professionals	11,411	36.0%	20,226	63.9%	31,674
Other	4,699	43.3%	6,141	56.6%	10,856
Subtotal	17,662	36.7%	30,410	63.2%	48,127
Part time					
Executives	0	0%	0	0%	0
Directors	4	100%	0	0%	4
Managers	16	84.2%	3	15.8%	19
Professionals	354	85.3%	61	14.7%	415
Other	45	93.8%	3	6.3%	48
Subtotal	419	86.2%	67	13.8%	486
Total					
Total	18,081	37.2%	30,477	62.8%	48,558

* In some cases, the total does not equal the sum of the segments because the gender of some employees is uncategorized.

	2016
Lost workday case rate, 2016*	
Global	0.16
Americas	0.12
Europe, Middle East, and Africa	0.36
Asia Pacific and Japan	0.06
Recordable incidence rate, 2016**	
Global	0.22
Americas	0.23
Europe, Middle East, and Africa	0.43
Asia Pacific and Japan	0.07

	2016
Leading causes of lost workdays (% of total)	
Slips, trips, and falls	34%
Automobile accidents	26%
Struck by/against/cut by	22%
Ergonomics—materials handling	11%
Overexertion—not materials handling	3%
Leading causes of recordable incidents (with and without lost time) (% of total)	
Struck by/against/cut by	35%
Slips, trips, and falls	27%
Automobile accidents	13%
Ergonomics—materials handling	11%
Ergonomics—office environment	6%

* 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. Rates are calculated using Occupational Safety and Health Administration (OSHA) definitions for recordability around the world and using OSHA calculation methodologies. The figures are based on employees working an average of 2,000 hours during a full year. The U.S. average in 2016 for the “Other Information Services”—NAICS #519 industry was 0.16. Americas includes incidents occurring in Argentina, Brazil, Canada, Colombia, Costa Rica, and the United States. Asia Pacific and Japan includes incidents in Australia, China, India, Japan, Malaysia, New Zealand, Pakistan, Philippines, Singapore, South Korea, Taiwan, Thailand, and Vietnam. Europe, Middle East, and Africa includes incidents in Austria, Belgium, Bulgaria, Czech Republic, France, Germany, Hungary, Ireland, Israel, Italy, Poland, Portugal, Spain, Switzerland, and the United Kingdom.

** 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. Rates are calculated using OSHA definitions for recordability around the world and using OSHA calculation methodologies. The figures are based on employees working an average of 2,000 hours during a full year. The U.S. average in 2016 for the “Other Information Services”—NAICS #519 industry was 0.22. Americas includes incidents occurring in Argentina, Brazil, Canada, Colombia, Costa Rica, and the United States. Asia Pacific and Japan includes incidents in Australia, China, India, Japan, Malaysia, New Zealand, Pakistan, Philippines, Singapore, South Korea, Taiwan, Thailand, and Vietnam. Europe, Middle East, and Africa includes incidents in Austria, Belgium, Bulgaria, Czech Republic, France, Germany, Hungary, Ireland, Israel, Italy, Poland, Portugal, Spain, Switzerland, and the United Kingdom.

Communities

Total social investment spend	2016
Social investment* [\$ million]	
Cash	\$1.06
Products**	\$1.91
Services***	\$1.41
Social investment [% of net earnings]	0.2%
U.S. employee participation in Cash Matching Program [number of employees]	
Cash Matching Program	2,800
Contributions to Cash Matching Program [\$ million]	
U.S. employee contributions to Cash Matching Program	\$1.13
HP Foundation contributions to Cash Matching Program	\$1.02

* Social investments include all grants made to nonprofit organizations from HP, plus the valuation of employee volunteer hours. Data excludes investments in some of the initiatives described in the Communities section, such as HP Reinvent the Classroom, HP Learning Studios, and HP National Education Technology Assessment. Data excludes contributions to the HP Foundation and employee donations but includes HP’s matching contributions and contributions from the HP Foundation to other organizations.

** 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.

*** Services include the valuation of HP employee volunteer hours. Valuation rates are based on CECF standards.

Disaster preparedness and relief, 2016*			
Description of event	Location	Partners	Amount
Disaster Responder Grant		American Red Cross	\$250,000
Earthquake	Italy	Silicon Valley Community Foundation	\$100,000
Flooding	Louisiana, United States	American Red Cross	\$100,000
Fire	Romania	Romanian Red Cross	\$50,000
Shooting	Paris, France	Assistance Publique- Paris Hospital	\$50,000
Flooding	Texas, United States	American Red Cross	\$50,000
Cyclone	Fiji	International Federation of Red Cross	\$25,000
Earthquake	Ecuador	American Red Cross	\$25,000
Earthquake	Japan	Silicon Valley Community Foundation	\$25,000
Total			\$675,000

* The totals shown in this table represent the total donation per disaster, to the nearest \$1,000, and may span multiple fiscal years. Figures include employee donations as well as matched funds and grants from the HP Foundation.



Integrity



HP is committed to always acting with integrity, fairness, and accountability, which are fundamental to an inclusive society and a thriving business.



Corporate ethics

Reaffirming customer and stakeholder trust, every day

We work every day to uphold our reputation for integrity and ethical leadership. As a result, our employees are proud to work at HP, and customers, partners, and suppliers want to do business with us.

99.74%

of HP employees, including senior executives, completed ethics training in 2016

Everyone at HP is expected to meet the highest ethical standards and to treat others with integrity, respect, and fairness. [Our Standards of Business Conduct \(SBC\)](#), updated in 2016 using simpler, clearer language, outlines expected employee behaviors, and is supported by comprehensive training and communication, [additional targeted policies](#), and robust governance at every level.

HP is committed to complying with all applicable laws and regulations everywhere we operate. Beyond our own operations, we use our scale and influence to encourage and support ethical conduct by our suppliers, partners, and the broader IT industry. Read more in [Supply chain responsibility](#) and [Human rights](#).

Goals

2016 goals	Status
Continue to improve the amenities screening and approval process and related training.	Achieved
Develop, implement, and enhance controls tailored to HP's corruption risks.	Achieved
Continue to improve and enhance U.S. public sector business controls.	Achieved
Maintain greater than 99% completion rate of annual SBC training among active HP employees and the Board of Directors.	Achieved (99.74%)
Streamline the SBC investigations process to increase speed and transparency.	Achieved
Tailor ethics communications and tools to align with HP's culture and ensure that our values are carried forward and upheld.	Achieved
2017 goals	
Maintain greater than 99% completion rate of annual SBC training among active HP employees and the Board of Directors.	

Governance

Clear lines of authority and oversight

HP's Ethics and Compliance Office, within Global Legal Affairs, manages ethical issues across our global operations. The following graphic illustrates governance of ethics and compliance at HP.



See [HP's Governance page](#) for more information about the board's composition, its committees and respective charters, our company bylaws, and our Corporate Governance Guidelines.

Reporting ethics concerns

Open-door approach

We make it easy for stakeholders anywhere, including employees, customers, business partners, and suppliers, to ask questions or report an ethics concern without fear of retaliation. Reporting avenues include email, an internal online form, a global 24-hour toll-free hotline with translation, mail, or in person. We offer anonymous reporting options where allowed by law. Employees can also reach out to their supervisor or more senior managers, seek advice from internal ethics and compliance experts, or consult local SBC teams or SBC liaisons at any time. [Learn more](#).

Investigating concerns

Suspected violations of our SBC damage the trust of customers and other stakeholders. We take all alleged violations seriously, respond quickly, and take disciplinary or remedial actions when appropriate. Representatives from our legal, controllership, and human resources teams conduct local investigations. In cases where allegations are escalated, a dedicated team in Global Legal Affairs takes over.

In 2016, HP launched a new investigation process, which improved our capability to perform investigation-related functions in-house. We also enhanced our global case management system, so that we can spot potential trends in ethics violations and determine whether and where additional controls may be necessary. These initiatives enabled us to improve our investigation time. Moving forward, we will continue to further increase our ability to analyze data in-house.

Ethics training

Maintaining an ethical culture requires everyone's participation

All employees and board members complete an annual SBC training course which covers key policies and procedures, ethics, and high-risk issues. Frontline employees and select partners in higher-risk countries also receive online and in-person training and guidance from our Ethics and Compliance Office and members of the Global Legal Affairs team.

In 2016, we shortened the training, and used interactive case studies to make the content more relevant and impactful. We achieved a 99.74% participation rate, despite reducing the training window from 18 to five weeks.

Each quarter, we celebrate "Ethics Champions" who demonstrate ethical leadership or model HP values. In 2016, six employees won recognition for their standout contributions, including reporting suspected misconduct and demonstrating a deep understanding of ethics policies in interactions with customers and suppliers.

Items reported to HP global SBC team or other compliance functions, 2016

Percentage of total

Total number of reported items in 2016: 342

	2016
Human resources	24%
Fraud	12%
Conflicts of interest	11%
Misuse of assets	11%
Workplace security and theft	8%
Anti-corruption*	7%
Financial and public reporting	4%
Competition	2%
Confidentiality	2%
Customer relationships	2%
Sales channel violations	2%
Other	15%

* The Anti-corruption category is broadly defined and includes allegations of commercial bribery, kickbacks, and Global Business Amenities Policy violations, as well as alleged corruption related to foreign public officials.

Anti-corruption

We actively protect ourselves from corruption risk

Corruption presents a significant risk for the IT industry. It disrupts fair competition, threatens customer trust, and undermines HP values. We are vigilant in combating corruption and do not tolerate corrupt behavior of any kind, including bribery and kickbacks.

Our Anti-corruption compliance program requires HP employees, business partners, and suppliers to follow all applicable national laws and regulations including the U.S. Foreign Corrupt Practices Act and the UK Bribery Act. In addition, suppliers must comply with our rigorous internal standards, including our [Anti-corruption Policy](#) and [Global Business Amenities Policy](#). In 2016, we improved the functionality of our online Amenities Approval Tool, which streamlines approvals for providing or receiving business amenities such as meals, travel, entertainment, or gifts.

Risk assessment and audits

Anticipating potential corruption risks across our global operations helps HP to operate safely and securely and protect our reputation. We use both internal data and Transparency International's Corruption Perceptions Index to detect high-risk regions, assess risks related to third-party business partners, and then alert relevant employees. We benchmark our approach against peer companies to identify best practices in areas including operational procedures, employee education, and supplier and partner training and monitoring.

HP conducts regular audits focused on potential corruption risks, including audits of our own operations. In 2016, we assessed corruption-related risks for the company. We also conducted risk assessments of third parties including sales intermediaries or "agents," suppliers, lobbyists, and channel reseller partners. These assessments used an improved due diligence questionnaire, focusing on organizations with high-risk profiles. We will continue to enhance our third-party screening program to ensure consistent and comprehensive review.

Anti-corruption training

Anti-corruption content is central to the annual SBC refresher training course for all employees. We also provide specialist training to staff in sensitive jobs. For example, in 2016:

- More than 27,000 employees worldwide received specialist training and there were an additional 41 live (face-to-face and virtual) sessions.
- Over 2,000 employees completed training tailored to the unique requirements of conducting business with the U.S. government.

In addition, we communicate globally year-round to reinforce compliance policies, controls, and training. This is intensified around critical business times.



Protecting customers and employees in an online world

HP's business success depends on our commitment to respecting the privacy of our customers and employees, and we give top priority to protecting the personal data entrusted to us, while providing market-leading technologies, products, and solutions that ensure high levels of security. Our commitment to maintaining internal standards and policies that go beyond legal minimums to protect privacy and help to block cyberattacks gives our customers the confidence to share information with HP and to use our technology.

We understand that customers want clear and transparent information from us. In 2016, we published a new [Privacy Statement](#) with simpler, more customer-friendly language along with an illustrated data collection and use matrix to provide customers with information about what we collect, how we use it, and why. Over the last year, we introduced the industry's most secure PCs with the world's only integrated privacy screens, designed to combat visual hacking.

Management and oversight

Our commitment is backed up by clear strategy, standards, and engagement

We collect and use personal data to manage our customers' relationships with HP and to better serve our customers by personalizing their experience and interactions with us. In order to safeguard this data we have rigorous controls, standards, policies, and procedures as well as training for employees who handle personal data.

Our commitment to customer privacy is outlined in our [Privacy Policy](#) online.

- We only collect personal data to support reasonable business requirements, and do not sell, rent, or lease the personal data that we collect.
- We give people notice and choice about the type of personal data we collect and its intended uses, and we do not use that data for other purposes.
- We strive to ensure that all applicable personal data is accurate, complete, and current, and we give people reasonable access so they can review and correct it, as needed.
- We protect personal data against unauthorized use or disclosure, and apply additional protection for sensitive data.

- We do not transfer personal data to others unless they promise to give the data the equivalent level of protection that HP provides.
- We address complaints or disputes regarding personal data promptly and courteously.

The HP Privacy Accountability Framework is our companywide approach for assessing and managing risks associated with collecting and handling personal data. The Framework goes beyond minimum legal requirements, ensures transparent practices, and takes into account our company values, ethical considerations, and contractual agreements.

Our executive-level HP Privacy and Data Protection Board (PDPB) provides oversight and leadership for HP businesses and global functions entrusted with protecting privacy and personal data. The PDPB is part of an integrated privacy program that enables us to manage privacy and data protection risks efficiently and effectively. In 2016, the PDPB began driving HP's compliance program for implementing the EU General Data Protection Regulation (GDPR).

Privacy training is a key part of our mandatory Standards of Business Conduct (SBC) annual refresher course, completed by 99.74% of active employees in 2016. We will implement privacy trainings during 2017 for all relevant employees based on materials developed by International Association of Privacy Professionals (IAPP).

Global compliance in privacy

HP complies with and provides input on privacy laws and regulations worldwide. We track the number of substantiated complaints of third parties about customer privacy and data, as shown in the table.

Substantiated complaints regarding breaches of customer privacy and losses of customer data at HP*

	2016
Substantiated complaints from outside parties (including customers)	5
Substantiated complaints from regulatory or other official bodies	0

* Breaches of customer privacy cover any noncompliance with existing legal regulations and voluntary standards regarding the protection of customer privacy related to data for which HP is the data controller. Substantiated complaints are written statements by regulatory or similar official bodies addressed to the organization that identify breaches of customer privacy, or complaints lodged with the organization that have been recognized as legitimate by the organization.

Global standards and regulatory involvement

The secure movement of data is essential to our business, and we advocate for mechanisms that enable us to easily and securely move data while maintaining our privacy standards. Our privacy and government relations teams work with governments around the world to provide input for robust and globally interoperable privacy regulations. For more information, see [Government relations](#).

In developing our privacy policies and standards, we consider global principles and frameworks. These include the Organization for Economic Cooperation and Development (OECD) Guidelines on the Protection of Privacy and Transborder Flows, the EU Directive 95/46/EC, the Asia-Pacific Economic Cooperation (APEC) Privacy Framework, and the Madrid Resolution on International Privacy Standards. We also monitor development of new regulatory instruments, such as the GDPR. Based on our existing systems and capabilities we are well positioned to comply with GDPR, which will become the global standard for HP.

In 2016, we received EU-U.S. Privacy Shield Certification from the U.S. Department of Commerce, which certifies our compliance with EU data protection requirements when transferring personal data from the European Union to the United States. Although joining the Privacy Shield is voluntary, the commitment is enforceable under U.S. law. We are in the process of updating our binding corporate rules (BCRs) with the EU, which allows us to continue moving data we control with minimal disruption. HP remains among fewer than 100 companies worldwide recognized by EU data protection authorities for our binding corporate rules. The Asia-Pacific Economic Cooperation (APEC) of 21 economies implements the Cross-Border Privacy Rules (CBPR) System, which provides privacy protections for transfers of personal data across the region. HP's privacy practices comply with the APEC CBPR System, including transparency, accountability, and choice regarding the collection and use of personal information.

Cybersecurity

In our industry, hostile attempts to acquire personal and financial information are constant. HP's responsibility is to block these attempts, and we do so through robust internal controls and external partnerships.

Our Cybersecurity Organization provides and maintains the guidance, governance, processes, resources, and vendor relationships necessary to identify unwanted access, security threats, and cyberattacks, and shield our customer and employee information. HP's IT partners and vendors deliver the technology to protect customer and employee information.

Everyone at HP has a role in information security, and we are committed to working across all business groups and global functions to ensure that each person is doing their part. In 2016, we refreshed our information security policies and standards to be more actionable and tailored to a range of roles. Our internal Cybersecurity Policy Suite provides a framework for the organization, governance, and implementation of information security across the company and informs employees about regulatory requirements, emerging threats, and new security practices, among other items.

When incidents do occur, the Cybersecurity Organization responds swiftly and regularly reports related activities to the relevant leadership. In 2016, we enhanced our understanding of the techniques used by hostile actors, and improved existing security measures. This included a formal initiative to revamp our Incident Response Plan and associated processes. Across our global operations, HP did not experience any cybersecurity events that required disclosure.

Contacting our Privacy Office

Customer feedback is very important to us. Please contact our [Privacy Office](#) with questions or comments about how we collect and use customer data, or about our new [Privacy Statement](#). We do our best to respond to customer queries and resolve complaints in a timely and appropriate way.

Product security

We design privacy and security into all of our products and solutions

As cyberattacks become increasingly prevalent and sophisticated, security breaches are a growing concern for our customers. In response, we are continually evolving HP products to offer higher levels of protection that anticipate ever-changing attack tactics.

Our product designers consider security at each stage of the design process. In 2016, HP launched a Product Security Council to help oversee this portfolio-wide effort. Made up of cross-functional business leaders from across the company, the Council will focus on developing appropriate security standards across all HP products through our Secure Development Life Cycle guidelines. From design through customer use, refurbishment, and recycling, each product will incorporate the Privacy by Design approach. When issues do arise, we investigate reported security vulnerabilities affecting HP products and services.

Our Supply Chain Security Group ensures that HP products are built to resist even the toughest attacks. We employ cybersecurity specialists and ethical hackers, and build in

supply chain controls to prevent the inclusion of product “backdoors” and the insertion of counterfeit product components and parts. These safeguards include a cybersecurity architecture review, penetration testing, scanning using industry solutions, and development of a supplier product cybersecurity standard that contractually holds all suppliers to requirements to mitigate the risks of counterfeits, malware, and tampering.

Printers



HP continues to produce the world’s most secure printers.¹ All enterprise LaserJet and PageWide products introduced since spring 2015 include the following industry-leading security features that defend network entry points and guard against intrusions:

- HP Sure Start: enables detection of and self-healing recovery from malicious BIOS attacks.
- Whitelisting: allows only known firmware to be loaded and executed on these printers.
- Run-time Intrusion Detection: provides in-device memory monitoring for malicious attacks.

We also offer customers HP JetAdvantage Security Manager, an industry-leading printer security compliance solution. With this technology, a company’s IT staff can effectively establish and maintain custom security policies. Upon reboot, the HP Instant-On Security feature checks and resets any impacted settings automatically to bring devices into compliance with the organization’s policy. HP JetAdvantage Security Manager also offers auto-discovery of devices to make it easier to find and add printers to manage.

In late 2016, we announced our redesign of HP Managed Print Services, now known as HP Secure MPS, to help protect corporate print environments against cyberattacks. By adding a range of implementation and professional services, and preconfiguring devices with more secure settings, HP Secure MPS helps companies improve their security profile while outsourcing printing and saving IT resources.

Personal systems

In 2016, we unveiled a comprehensive set of security solutions in our Elite PCs, focused on protecting not only the device, but also the user’s identity and data—making them the world’s most secure and manageable PCs.²

Our Basic Input/Output System (BIOS) security has protected our PCs since 2006. We build our Elite line of PCs with HP Sure Start Gen3, which can detect and recover from an advanced persistent attack on the BIOS in less than a minute.

Today’s cyberthreats strike on many fronts. To better protect the user’s identity, we have developed HP Multi-Factor Authenticate. Integrating Intel’s Authenticate technology, this combines credentials such as a password and fingerprint to make user login a million times more secure.

In 2016, we also launched HP Sure View, the world’s only PC integrated privacy screen,³ which makes it harder for unauthorized people to steal private data by peering over the shoulders of unsuspecting users. To help customers protect against malware attacks in a web browsing session, in early 2017 we announced HP Sure Click, developed in partnership with Bromium.

To allow IT admins the tools they need to enforce security policies, we created the HP Manageability Integration Kit, the world’s first management toolkit certified for Microsoft System Center Configuration Manager. Until now, this was mostly a manual process.



HP EliteBook 1040 with Sure View in Privacy Mode.



Treating everyone, everywhere with dignity and respect

With our brand comes a promise—that HP products are engineered and manufactured with integrity and respect for the people who help make them. Respecting human rights is a core value at HP, shaping how we do business worldwide. We work closely with our suppliers to protect and empower their workers and improve labor standards (see [Supply chain responsibility](#)), so that workers and communities in our supply chain can thrive. In our own operations, we promote a welcoming, diverse, and inclusive culture (see [Employees](#)) and do not tolerate discrimination of any kind. We consider privacy a human right, and prioritize protecting customer information (see [Privacy](#)).

Respecting human rights

We actively monitor and manage human rights risks across our business



We take an uncompromising stance on respecting the fundamental rights and freedoms to which all people, everywhere are entitled. HP upholds these rights across our business, in line with the United Nations (UN) Universal Declaration of Human Rights (UDHR), the UN Guiding Principles on Business and Human Rights, and the UN Global Compact. We embed human rights policies and practices across our business, guided by the [HP Sustainability Policy](#).

HP embraces this responsibility, conducting due diligence and human rights risk assessments on our business activities that might impact rights. We closely monitor human rights risks and activities that raise potential concerns, and swiftly address problems that arise.

In 2016, we evaluated all nine relevant corporate functions against the appropriate UN UDHR rights. We identified salient risks (those which are severe in potential impact, reasonably likely to occur, and difficult to remediate) in four of those functions: Supply Chain Responsibility, Global Indirect Procurement, Human Resources, and Technical Regulations. For Human Resources and Technical Regulations, we found effective monitoring and grievance mechanisms in place, and remediation available to human rights holders. The table that follows summarizes the salient risks identified, grouped by phase of our value chain, and describes our risk mitigation approach.

HP is committed to communicating openly and honestly about the human rights issues facing our business and industry. We believe this fosters productive dialogue on solutions and builds trust among our key stakeholders.

Results of 2016 human rights risk assessment

Value chain phase	Salient risks	Risk mitigation tactics
Supply chain (Supply chain responsibility, global indirect procurement)	Right to life: Unsafe working conditions at supplier sites Right to work: Labor conditions that are not consistent with the HP Supplier Code of Conduct	We evaluate relevant suppliers using a preliminary risk assessment. Based on various factors, we then prioritize suppliers for assessment questionnaires, capability building, and on-site audits or assessments. See Supply chain responsibility for more detail.
Supply chain (Supply chain responsibility, global indirect procurement)	Right to life: Conflict and forced labor associated with raw material extraction	We conduct due diligence; help increase demand for responsibly sourced minerals; maintain responsible sourcing programs; and participate in multi-stakeholder organizations that promote wide adoption of responsible sourcing. See Responsible minerals for more detail.
Operations (Human resources)	Right to work: Workforce reduction programs	We focus on business growth and providing employee support and severance when reduction programs are required.
Products and solutions (Technical regulations)	Right to life: Unsafe or malfunctioning products	We employ rigorous design standards, product testing, certification programs, and auditing.

Human Rights Council and culture

In 2017, we will establish a companywide Human Rights Council to further strengthen our efforts. Chaired by the head of the Human Rights Office, its members will include senior management from Ethics and Investigations, Human Resources, Privacy, Supply Chain Responsibility, and Global Indirect Procurement. The Council will meet periodically to discuss strategy and coordinate due diligence and risk mitigation.

Open communication is part of our culture. It is important that anyone with a concern can speak up without fear of retaliation, using their preferred method of communication. We offer multiple channels convenient for employees and other stakeholders, such as business partners and customers, to ask questions or report a concern to HP. We also provide stakeholders with information about HP's programs related to specific human rights issues such as combating forced labor and human trafficking (see our [Modern Slavery Act Transparency Statement](#)).

Cobalt sourcing and child labor risks

The use of child and forced labor is unacceptable to HP. In January 2016, it was reported that cobalt processed by Huayou Cobalt for use in lithium-ion batteries in electronics and automotive components may have been mined using child labor in the Democratic Republic of the Congo. In response, we undertook several actions. We investigated the allegations, conducted due diligence of our battery-related suppliers to understand their sources of cobalt, and agreed on a course of action with those suppliers to demand third-party validation of their smelters.

Similar to our work related to conflict minerals, we are leading industry organizations to develop tools and programs (including the [Responsible Cobalt Initiative](#) and the [Responsible Raw Materials Initiative](#)) that support responsible sourcing and increase the influence that manufacturers have over smelters. For more information, see our report on [responsible cobalt](#).

#1

HP's ranking on [Know the Chain's ICT Benchmark Findings Report on the transparency of efforts to eradicate forced labor from our industry's supply chain](#)

Technology and human rights

IT is reinventing how we live and work, and improves the lives of people everywhere. However, such technology can also be used for unintended purposes or in contexts that may affect human rights. To avoid the misuse of our products and solutions, HP abides by all relevant sanctions, restrictions, and embargoes imposed by national governments or international organizations in its business operations worldwide. When we identify a potential risk of human rights impacts from our business relationships, we conduct thorough human rights due diligence. When others make allegations linking our business to adverse human rights consequences, we investigate the claims in line with our [HP Sustainability Policy](#). Wherever we can exert influence to mitigate alleged human rights impacts we do so.

Partnering on human rights

Amplifying our influence on the industry and beyond

Given our global reach, HP's influence in supporting the dignity and well-being of people across our business—from supply chain workers to employees and customers—touches communities worldwide. To expand our reach, we actively promote respect for human rights in public forums, working with a wide range of stakeholders, including governments, NGOs, and other businesses.

In 2016, we took part in many prominent and influential national and global initiatives including:

- Conflict-Free Sourcing Initiative
- Electronic Industry Citizenship Coalition (EICC)
- Global Business Initiative on Human Rights
- Leadership Group for Responsible Recruiting
- Responsible Cobalt Initiative
- Responsible Raw Materials Initiative
- Social Accountability International Advisory Board (TenSquared program to improve worker health and safety)
- UN Annual Forum on Business and Human Rights
- U.S. Stakeholder Advisory Board on the OECD Guidelines for Multinational Enterprises



Government relations

Advocating for public policies that drive progress

Technology's transformative potential is limitless. HP advocates for public policies that enable our business to grow by unleashing this potential—in ways that create jobs, spur growth, and promote innovation and sustainability. We work to remove barriers to, and accelerate development of, revolutionary technologies that can blend the physical and digital worlds, transform manufacturing through advances such as 3D printing, expand access to key services including healthcare and education, and protect privacy. The broad policy agenda we support includes intellectual property rights; market access; security, privacy, and data protection; social responsibility; environmental sustainability; and taxation and economic incentives.

Our in-house Government Relations team leads our engagement with policy makers, regulators, trade associations, and peer companies. After Hewlett-Packard Company separated into two companies on November 1, 2015, we briefed more than 300 government officials worldwide on HP's agenda and priorities. Our advocacy work complies with all applicable national and international laws, as well as our own [Standards of Business Conduct](#).

3D printing

As technology develops, we anticipate limitless uses for 3D printing. In the decades ahead, medicine, vital organs, and even food may be created with this revolutionary technology. 3D printing has the potential to reduce manufacturing costs, GHG emissions, energy use, and resource consumption by better matching supply and demand. HP is at the forefront to advance 3D printing and bring its transformative benefits to all of society. Working with a coalition of technology providers and customers, and the World Customs Organization, our main aim is to ensure that 3D printing systems remain duty and regulation free during this crucial early stage of development, to foster further innovation and commercial application. In 2016, HP held several briefings for Congressional staff and members on 3D printing end point security. [Learn more](#).

Policy priorities

Focusing on the issues that matter most to HP and our customers

Intellectual property rights

Intellectual property (IP) protection is essential to innovation. Each year, HP invests significant resources to develop cutting-edge technology products and drive the next waves of innovation. In our highly competitive industry, safeguarding our IP, including over 18,000 patents, is a business imperative. We support strong protection of IP rights in every market, including through our leading anti-counterfeiting program. We promote reform and phasing out of copyright levies systems and replacement by alternative means of compensation. We also encourage patent reform measures to protect against frivolous litigation, unwarranted product exclusion, and excessive licensing fees unrelated to patent value.

[Learn more.](#)

Market access

Open international trade is essential to delivering on our vision to create technology that makes life better for everyone, everywhere. HP supports the opening of markets through trade agreements and other measures that reduce and eliminate duties and non-tariff barriers on IT products and services. Trade agreements should provide strong protection and enforcement of IP rights, encourage regulatory transparency and convergence, and facilitate trade and easy movement of items through customs. Agreements should also address emerging non-tariff barriers affecting the high-tech sector.

HP urges all parties to support and implement the expansion of the Information Technology Agreement to eliminate duties on the additional 201 technology product categories as quickly as possible. As a next step, 3D printing systems and accessories should be considered for duty-free treatment under the next Information Technology Agreement periodic product review to provide coverage for new innovations in this field.

Government procurement policies should be based on objective criteria and include internationally recognized quality standards to ensure fair competition and access to the best technologies globally. Policies should also emphasize sourcing legitimate products and preventing counterfeits or illegal and infringing products, including clone print cartridges, from being sold to government agencies. Preferences for remanufactured/ refilled print cartridges over original manufacturers' cartridges do not take into account quality, total value, and overall life cycle environmental performance.

[Learn more.](#)

Security, privacy, and data protection

HP recognizes the fundamental importance of privacy, security, and data protection. As our world becomes ever more connected, cyberattacks target critical and personal data with increasing frequency and sophistication. We design our devices with embedded cyber-resilience, offering leading-edge features that enhance security to protect our customers' sensitive information. In addition to these security measures, we aim to

provide the highest levels of privacy and data protection, surpassing legal minimums for safeguarding personal information through stringent global policies, procedures, and controls. Read more in [Privacy](#).

Even as overall awareness of cyberthreats has grown, risks at the device level (e.g., computers and printers) are often overlooked. We encourage both the public and private sectors to consider device security as part of overall cyber risk assessments. Public sector procurement practices can mitigate device security risks by developing robust purchasing criteria that explicitly require device security, especially for critical applications. Any cybersecurity legislation and regulations for commercial products should align with global standards. Geographic restrictions and country-specific technical standards are ineffective approaches to cybersecurity policies.

Our privacy and government relations teams work with governments around the world to support robust and globally interoperable privacy and data protection regulations. We advocate for accountability-based requirements for both the public and private sectors. In 2016, HP made progress on a range of regional privacy standards. In Europe, we are closely following the EU Article 29 Working Party implementation of the General Data Protection Regulation, and will provide comments and feedback to ensure that requirements align to the daily realities of implementing a successful privacy and data protection program.

[Learn more.](#)

Social responsibility



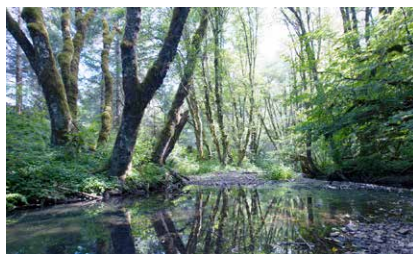
Through our actions and investments, we strengthen our communities, enable the development of society at large, and act with integrity and respect for human rights around the world. HP collaborates with governments, other companies, and nongovernmental organizations to protect the rights of workers everywhere. We are committed to doing our part to uphold human rights, as demonstrated by our [supply chain responsibility](#) program, which respects the rights of workers, including migrant workers. This risk-based program combines rigorous auditing with collaborative capability-building initiatives, targeting both production and nonproduction suppliers. We protect worker health and safety in the manufacturing process, including by responsibly managing process chemicals.

HP is an industry leader in working to eliminate [conflict minerals](#) from our electronics supply chain. The possibility that the manufacturing of our products might be connected to the funding of armed conflict is unacceptable to HP, and we continue working to ensure that tantalum, tin, tungsten, and gold used in our supply chain are conflict-free. We will continue our leadership role on this issue, building on nearly a decade of engagement. We strongly support retaining the U.S. conflict minerals reporting framework at the Securities and Exchange Commission, since it has become an economic driver for smelters to responsibly source minerals in the Democratic Republic of the Congo and surrounding countries. Eliminating this requirement would result in the collapse of hundreds of mine-level traceability systems in that region and reverse the industry's conflict-free momentum.

In early 2017, we were among more than 120 mostly technology companies that signed an amicus brief opposing a U.S. executive order on immigration. In doing so, we demonstrated support for the contributions of immigrants to the United States, and for all HP employees and their families as a force of innovation.

[Learn more.](#)

Environmental sustainability



Our commitment to sustainability is a powerful force for innovation in our business, pushing the boundaries of energy efficiency and alternative energy use, sustainable design, and responsible product life cycle management. HP advocates for prioritizing energy efficiency in government procurement, addressing climate change, promoting responsible and consistent materials and chemical use policies, and propelling the circular economy and responsible product repair, reuse, and recycling.

We believe that delivering the economic and social benefits of technology to billions more people must be done sustainably. This requires a profound shift from a traditional, linear production model of “take, make, dispose,” to a more materials- and energy-efficient, [circular and low-carbon economy](#). HP designs products that last long, are easy to repair and upgrade, and demonstrate high recyclability to continually recover and reuse materials. We are accelerating toward a circular approach across our value chain, reflected in our print supplies closed loop recycling programs, our use of recycled content in hardware, product-as-a-service offerings such as [HP Managed Print Services](#), [HP Instant Ink](#), and [HP Device as a Service](#), innovative packaging designs, and [HP product repair, reuse, and recycling](#) options. Connecting our circular economy strategy to resource efficiency is critical to business success, so we design our products and services following the principles of energy efficiency, materials innovation, and design for recyclability.

HP is dedicated to reducing the environmental and human health impacts of materials and chemicals throughout our supply chain. We support the goal to restrict substances of concern and responsibly manage chemicals. At the same time, the long-term roadmap for doing so must be established and stabilized so that material restrictions do not constrain the circular economy. Equally important, chemicals can be identified and encouraged as substitutes using tools such as the Green Screen™ for Safer Chemicals, so that producers are not forced to switch from one problematic chemical to another.

We promote regulatory frameworks that support efforts to extend our products’ lives through repair and reuse. Transitioning purchasing from a transactional model to a service model will tighten the linkage between product design and value recovery at end of service. We also encourage responsible legislation on collection and recycling of used electronics that takes into account shared responsibilities, measurement of waste flows, workable flow systems, harmonized recycling standards, and fair allocation of obligations. HP does not allow the export of electronic waste from developed to developing countries, and engages with governments worldwide 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. We strongly support the updated language in the Technical Guidelines that recognizes the appropriate movement of nonworking products between countries to allow for proper repair or responsible recycling.

Climate change is one of the most significant and urgent issues facing business and society today. The science is clear, the impacts are serious, and the need to act is essential. At HP, we see this not only as our responsibility, but vital to the longevity of our business. HP is working to ensure that our business is resilient, innovating to mitigate the effects of climate change and adapting to an evolving global business and regulatory environment.

HP supports the Paris Climate Agreement as originally adopted by consensus in December 2015, participation in the United Nations Framework Convention on Climate Change, and other global efforts to address climate change. We encourage actions by all countries to enact policies to mitigate climate change and help transition to a low-carbon economy that are guided by technologically and economically feasible targets based on the best

available science. We support market-based approaches that provide transparency and accountability, promote innovative technologies to lower carbon footprints (such as the Internet of Things and 3D printing), and encourage renewable energy sources.

The historic 2015 Paris Climate Conference (COP21) highlighted the leading role business can play to address climate change. In the lead-up to COP21, we signed on to the following public statements and initiatives supporting strong climate action and outcomes: White House-led [American Business Act on Climate Pledge](#), [Business Backs Low-Carbon USA](#), Center for Climate and Energy Solutions [Business Statement Applauding The Paris Climate Agreement](#), and [We Mean Business](#).

After the U.S. presidential election, HP was among more than 360 businesses and investors endorsing an [open letter](#) urging President-elect Donald Trump to honor the U.S. commitment to the Paris Climate Agreement (that number has since grown to more than 1,000). The letter called for the continuation of U.S. low-carbon policies, and investment in the low-carbon economy at home and abroad, to help keep global temperature rise below 2 degrees Celsius. Moreover, HP and the other companies signing on to the letter reaffirmed our dedication to upholding our own commitments in this area.

HP has a long legacy of environmental leadership and a demonstrated commitment to climate action that is recognized by three consecutive years on the CDP Climate A List and five consecutive years on the Dow Jones Sustainability World Index. [Learn more.](#)

Taxation and economic incentives

We advocate for tax policies and economic incentives that encourage innovation, growth, and job creation worldwide. Domestically, we support U.S. federal tax reform. Internationally, we monitor and engage on tax reform proposals through the Group of Twenty (G20) and the Organization for Economic Cooperation and Development. With the elections of 2016 completed, the opportunity for genuine tax reform is greater than any time in recent history. During the second part of the year, we worked to educate Congressional tax committees on HP's interests in this area. [Learn more.](#)

Political engagement

Advancing our agenda in a transparent, legal, and ethical manner

In 2016, HP established a political action committee to support its policy commitments in the United States and participate, under the law, in U.S. Congressional elections. We will support candidates for public office who advocate for innovation and competition in our industry. All political engagement, including contributions to candidates for public office, will be conducted in a transparent, legal, and ethical manner and in accordance with HP's [Standards of Business Conduct](#). In addition, our [U.S. Public Sector Code of Conduct](#) guides ethical business interactions with federal, state, and local officials.

HP did not make any contributions to U.S. federal, state, or local candidates, political memberships/sponsorships, or other ballot measure campaigns during 2016. In the future, HP will disclose all corporate and political contributions.

Learn more on our [Government Relations](#) website.

Policies and standards

Sustainability

- [Sustainability Policy](#)

Accessibility

- [Accessibility Policy](#)

Corporate ethics

- [Anti-corruption Policy](#)
- [Contingent Worker Code of Conduct](#)
- [Corporate Governance Guidelines](#)
- [Global Business Amenities Policy](#)
- [Partner Code of Conduct](#)
- [Standards of Business Conduct](#)
- [U.S. Public Sector Code of Conduct](#)

Employees

- [Harassment-free Work Environment Policy](#)
- [Nondiscrimination Policy](#)
- [Open Door Policy](#)

Environment

- [Climate Change Policy](#)
- [Environmental, Health, and Safety \(EHS\) Policy](#)
- [Environmentally Preferable Paper Policy](#)
- [Export of Electronic Waste to Developing Countries Policy](#)
- [General Specification for the Environment \(GSE\)](#)
- [Hardware Recycling Standard](#)
- [Hardware Reuse Standard](#)
- [Materials and Chemical Management Policy](#)
- [Printing Supplies Recycling Policy](#)

Human rights

- [Global Human Rights Policy](#)

Privacy

- [Global Master Privacy Policy](#)
- [Privacy Statement](#)

Supply chain responsibility

- [Student and Dispatch Worker Standard for Supplier Facilities in the People's Republic of China \(PRC\)](#)
- [Supplier Code of Conduct](#)
- [Supply Chain Foreign Migrant Worker Standard](#)
- [Supply Chain Social and Environmental Responsibility Policy](#)

About this report

Overview

This report includes performance data from HP through FY2016 (which ended October 31, 2016), unless stated otherwise. The document also describes HP's sustainability policies and programs moving forward.

HP reports yearly on its social and environmental progress, following the standard Hewlett-Packard Company met each year since 2001. This document provides in-depth information to stakeholders including customers, industry analysts, socially responsible investors, nongovernmental organizations (NGOs), employees, sustainability specialists, governments, and others.

To guide our disclosure, we consider external standards and frameworks such as the [Global Reporting Initiative G4 Sustainability Reporting Guidelines](#), the [United Nations \(UN\) Global Compact](#), and the [UN Sustainable Development Goals](#), as well as reporting trends and strong practices. Our [sustainability website](#) and [customer brief](#) provide summary information for readers seeking a higher-level overview of our approach and performance, and in some areas, additional detail. [Previous reports](#) are available on our [website](#).

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 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 in this report covers HP operations but does not cover joint ventures.
- All references to years are to HP's fiscal year, which ends October 31, 2016, unless stated otherwise.
- All references to dollars are to U.S. dollars.
- "Tonnes" refers to metric tons.

Metrics and goals

The metrics in this report are HP data, unless stated otherwise. Collecting data from hundreds of sites worldwide is complex, and the process can vary by issue, business unit, function, and geography. As a result, it can be difficult to define and implement metrics for the entire company. We continue to standardize our measurement systems and metrics. Data is rounded to reflect the appropriate level of certainty.

Reporting performance beyond our immediate operations can also be challenging. For example, we must make assumptions when estimating Scope 3 greenhouse gas (GHG) emissions, product energy consumption and resulting GHG emissions, and the percentage of HP products sold that are recycled. Where appropriate, we describe the context for performance data to help readers understand any limitations and draw appropriate conclusions.

Forward-looking content reflects approaches, goals, and priorities established by the HP teams responsible for implementing them. These goals and priorities were set in consultation with internal, and in some cases external, stakeholders and take into account leading corporate practices.

Your feedback

Your comments and suggestions are important to us. Please provide any feedback on HP's Sustainability Report, performance, or website using our [online form](#).

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 any projections of net revenue, margins, expenses, effective tax rates, net earnings, net earnings per share, cash flows, benefit plan funding, deferred taxes, share repurchases, foreign currency exchange rates, or other financial items; any projections of the amount, timing, or impact of cost savings or restructuring and other charges; any statements of the plans, strategies, and objectives of management for future operations, including the execution of the restructuring plans and any resulting cost savings, net revenue, or profitability improvements; any statements concerning the expected development, performance, market share, or competitive performance relating to products or services; any statements regarding current or future macroeconomic trends or events and the impact of those trends and events on HP and its financial performance; any statements regarding pending investigations, claims, or disputes; any statements of expectation or belief, including with respect to the timing and expected benefits of acquisitions and other business combination and investment transactions; and any statements of assumptions underlying any of the foregoing.

Risks, uncertainties, and assumptions include the need to address the many challenges facing HP's businesses; the competitive pressures faced by HP's businesses; risks associated with executing HP's strategy; the impact of macroeconomic and geopolitical trends and events; the need to manage third-party suppliers and the distribution of HP's products and the delivery of HP's services effectively; the protection of HP's intellectual property assets, including intellectual property licensed from third parties; risks associated with HP's international operations; 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 trends; the execution and performance of contracts by HP and its suppliers, customers, clients, and partners; the hiring and retention of key employees; integration and other risks associated with business combination and investment transactions; the results of the restructuring plans, including estimates and assumptions related to the cost (including any possible disruption of HP's business) and the anticipated benefits of the restructuring plans; the resolution of pending investigations, claims, and disputes; and other risks that are described in HP's Annual Report on Form 10-K for the fiscal year ended October 31, 2016, and HP's other filings with the Securities and Exchange Commission.

HP assumes no obligation and does not intend to update these forward-looking statements. [HP's Investor Relations website](#) contains a significant amount of information about HP, including financial and other information for investors. HP encourages investors to visit its website from time to time, as information is updated and new information is posted.

External verification

Obtaining assurance helps demonstrate that the information provided in our Sustainability Report describes our performance accurately and completely.

In 2016, HP engaged external assurance provider Ernst & Young LLP (EY) to perform an independent review of selected key performance indicators in our 2016 Sustainability Report. This process was conducted in accordance with attestation standards established by the American Institute of Certified Public Accountants.

For a full listing of the indicators within the scope of EY's review, please see the [Independent accountants' review](#) report.

In addition, the following data in this report received external assurance during the year:

Product repair, reuse, and recycling: Through ERM, HP audited 43 vendor facilities in 23 countries during 2016. This included repeat audits of 33 vendors to evaluate their efforts to improve performance. Learn more in [Vendor audits](#).

Supply chain responsibility: HP engages third-party audit firms to conduct verification audits of our suppliers' social and environmental responsibility performance against HP Supplier Code of Conduct requirements. Learn more in [Supply chain responsibility](#).

Independent accountants' review report

Ernst & Young LLP
303 Almaden Blvd
San Jose, CA 95110
United States of America
Tel: +1 (408) 947-5500
www.ey.com

To the Board of Directors and Management of HP Inc.

We have reviewed the sustainability performance indicators (the "Subject Matter") included in Appendix A and as presented in the HP Inc. ("HP") 2016 Sustainability Report (the "Report") for the year ended October 31, 2016, unless otherwise stated, in accordance with HP's criteria set forth in Appendix A (the "Criteria"). We did not review all information included in the Report. We did not review the narrative sections of the Report, except where they incorporated the Subject Matter. HP's management is responsible for the Subject Matter included in Appendix A and as also presented in the Report, based on the Criteria. Our responsibility is to express a conclusion on the Subject Matter based on our review.

Our review was conducted in accordance with attestation standards established by the American Institute of Certified Public Accountants. Those standards require that we plan and perform our review to obtain limited assurance about whether any material modifications should be made to the Subject Matter in order for it to be in accordance with the Criteria. A review consists principally of applying analytical procedures, making inquiries of persons responsible for the Subject Matter, obtaining an understanding of the data management systems and processes used to generate, aggregate and report the Subject Matter and performing such other procedures as we considered necessary in the circumstances. A review is substantially less in scope than an examination, the objective of which is to obtain reasonable assurance about whether the Subject Matter, is in accordance with the Criteria, in all material respects, in order to express an opinion. Accordingly, we do not express such an opinion. A review also does not provide assurance that we became aware of all significant matters that would be disclosed in an examination. We believe that our review provides a reasonable basis for our conclusion.

As described in Note 1, non-financial information is subject to measurement uncertainties resulting from limitations inherent in the nature and the methods used for determining such data. The selection of different but acceptable measurement techniques can result in materially different measurements. The precision of different measurement techniques may also vary.

Based on our review, we are not aware of any material modifications that should be made to the sustainability performance indicators included in Appendix A for the year ended October 31, 2016, unless otherwise stated, in order for it to be in accordance with the relevant Criteria.

The signature of Ernst & Young LLP is written in a stylized, cursive script. The letters are dark and fluid, with the 'E' and 'Y' being particularly prominent.

June 14, 2017

San Jose, California

Appendix A: HP Inc. (HP) schedule of subject matter and criteria

Indicator name	Unit	Reported value ¹	Criteria
Scope 1 greenhouse gas ("GHG") emissions ²	Tonnes of carbon dioxide equivalents (tCO ₂ e)	66,000	World Resources Institute ("WRI") / World Business Council for Sustainable Development's ("WBCSD") The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard and HP's Carbon Accounting Manual
Scope 2 GHG emissions (location-based-method) ²	tCO ₂ e	352,400	
Scope 2 GHG emissions (market-based-method) ²	tCO ₂ e	317,700	
Scope 3 GHG emissions ²	tCO ₂ e	35,860,000	WRI/WBCSD's The Greenhouse Gas Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard and HP's Carbon Accounting Manual
Scope 1 energy consumption	Million kWh	157	Global Reporting Initiative ("GRI") G4, EN3 and HP management definitions disclosed in the FY16 Sustainability Report
Scope 2 energy consumption	Million kWh	722	GRI G4, EN3 and HP management definitions disclosed in the FY16 Sustainability Report
Voluntary purchases of renewable energy	Million kWh	75	GRI G4, EN3 and HP management definitions disclosed in the FY16 Sustainability Report
Direct water consumption ³	Cubic meters	3,224,000	GRI G4, EN8 and HP management definitions disclosed in the FY16 Sustainability Report ⁴
Conflict minerals disclosure ⁵	N/A - Qualitative assertion	To identify and disclose these smelters and refiners, between January and December 2016 HP surveyed suppliers which contributed material, components, or manufacturing for products containing 3TG. Each smelter or refiner reported was identified in at least one of the CFSP reporting templates we received.	HP management definitions disclosed in the FY16 Sustainability Report

Note 1: Non-financial information is subject to measurement uncertainties resulting from limitations inherent in the nature and the methods used for determining such data. The selection of different but acceptable measurement techniques can result in materially different measurements. The precision of different measurement techniques may also vary.

United Nations Global Compact index

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. This table links to the sections of this report that address the Global Compact's 10 principles.

“To promote higher standards across the areas of human rights, labor, environment, and anti-corruption, we endorse the United Nations Global Compact as a practical framework for the development, implementation, and disclosure of sustainability policies and practices.”

— Dion Weisler, President and Chief Executive Officer, HP Inc.

Principle	Information in report
Human rights	
Principle 1: Businesses should support and respect the protection of internationally proclaimed human rights; and	Supply chain responsibility Employees Privacy Human rights
Principle 2: make sure that they are not complicit in human rights abuses.	Supply chain responsibility Human rights
Labor standards	
Principle 3: Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;	Supply chain responsibility Human rights
Principle 4: the elimination of all forms of forced and compulsory labor;	Supply chain responsibility Human rights
Principle 5: the effective abolition of child labor; and	Supply chain responsibility Human rights
Principle 6: the elimination of discrimination with respect to employment and occupation.	Supply chain responsibility Diversity and inclusion Human rights
Environment	
Principle 7: Businesses should support a precautionary approach to environmental challenges;	Materials
Principle 8: undertake initiatives to promote greater environmental responsibility; and	Supply chain environmental impact Operations Products and solutions Product repair, reuse, and recycling
Principle 9: encourage the development and diffusion of environmentally friendly technologies.	Circular economy Supply chain environmental impact Operations Products and solutions Product repair, reuse, and recycling
Anti-corruption	
Principle 10: Businesses should work against all forms of corruption, including extortion and bribery.	Supply chain responsibility Anti-corruption

Material issues

The following table summarizes issues determined to meet the materiality threshold for this report.

- Environment
- Society
- Integrity

Issue	Description	GRI G4 Aspect(s)	Aspect boundary	Location in report
High importance to sustainable development, high importance to HP's business success				
● Labor practices in supply chain	Maintaining labor standards in working hours and conditions, wages and benefits, wage changes, labor shortages, health and safety, and humane treatment of workers employed in the supply chain, including efforts to avoid slavery and forced labor.	Nondiscrimination Freedom of Association and Collective Bargaining Child Labor Forced or Compulsory Labor	Supply chain (first- and second-tier suppliers)	Supply chain responsibility Human rights
● Privacy	Collecting, capturing, analyzing, using, storing, transferring and sharing information in a manner that upholds the right to privacy, during both commercial and government relationships; this includes ensuring that product functionality and default/factory hardware settings protect privacy.	Customer Privacy	HP operations (employees) Products and solutions (customers, clients, and partners)	Privacy Government relations
● Product energy efficiency	Increasing the energy efficiency of HP products and services, and enabling customers to reduce their energy use.	Energy	Products and solutions	Our footprint Products and solutions: Energy efficiency Innovation in 2016
● Product life cycle management	Managing the environmental and health and safety impacts of HP products through the entire product life cycle, from production of raw materials, through engineering design and manufacturing, to use, maintenance, reuse, recycling, and disposal.	Materials Energy Products and Services Customer Health and Safety Product and Service Labeling	Supply chain HP operations Products and solutions	Circular economy Our footprint Supply chain environmental impact Products and solutions Innovation in 2016 Product repair, reuse, and recycling
● Social application of IT	Providing IT solutions that improve access to health, finance, food, government services, education, information, markets, etc., while duly considering ethics in the social applications of big data.	Indirect Economic Impacts	Projects conducted in numerous locations globally (beyond HP's controlled operations)	Communities Privacy
Medium importance to sustainable development, high importance to HP's business success				
● Anti-corruption	Working against bribery, corruption, and extortion (e.g., price fixing, abuse of monopoly positions, predatory pricing, etc.).	Anti-corruption	Supply chain HP operations Products and solutions (interactions with partners and customers globally)	Supply chain responsibility Anti-corruption
● Data and product security	Ensuring that information collected, captured, analyzed, used, stored, transferred, and shared is protected from unwanted parties and unauthorized access, such as security threats and cyberattacks.	No GRI-specific Aspects	Supply chain HP operations Products and solutions	Privacy Government relations
● Diversity and inclusion	Working to ensure that the company workforce reflects its global business and customers.	Diversity and Equal Opportunity	HP operations Products and solutions (customers, clients, and partners)	Diversity and inclusion Human rights
● Ethical behavior and business partnerships	Promoting high standards of ethics in business behavior with all third parties with whom HP does business, including in joint ventures and with business partners, suppliers, and distributors.	Anti-competitive Behavior Compliance	Supply chain (interactions with suppliers, business partners, and contractors) HP operations (sales and marketing)	Corporate ethics HP 2016 10-K (Note 15: Litigation and Contingencies; this information is as of the end of FY16)
● Transparency, accountability, and reporting	Providing clear and comparable business and sustainability information in an accessible manner.	Overall report	Supply chain HP operations Products and solutions	GRI index
High importance to sustainable development, medium importance to HP's business success				
● Energy and GHG emissions in supply chain	Improving energy efficiency and reducing GHG emissions in HP's supply chain.	Energy Emissions	Supply chain (first- and second-tier suppliers, Scope 3 emissions)	Our footprint Supply chain environmental impact
● IT as a sustainability solution	Designing products and services that enable customers and entire industries to manage and reduce their environmental impacts.	Energy Products and Services	Products and solutions	Products and solutions

Issue	Description	GRI G4 Aspect(s)	Aspect boundary	Location in report
● Responsible paper sourcing	Responsibly sourcing paper products for internal use and sale to customers.	Materials	Supply chain	Paper
● Responsible sourcing of minerals	Working to ensure the responsible sourcing of minerals used in HP products (e.g., conflict minerals from the Democratic Republic of the Congo).	No GRI-specific Aspects	Supply chain (sub-tier suppliers in high-risk areas such as the Democratic Republic of the Congo; there are multiple tiers between HP and smelters who trade with exporters)	Responsible minerals
● Supply chain codes, standards, and engagement	Implementing and enforcing codes and standards that set a baseline for supplier social and environmental responsibility (SER) and improving HP suppliers' SER performance through engagement and transparency.	Supplier Environmental Assessment Supplier Assessment for Labor Practices Supplier Human Rights Assessment Supplier Assessments for Impact on Society	Supply chain (first- and second-tier suppliers) We ask that first-tier suppliers communicate our Electronic Industry Citizenship Coalition Code of Conduct to their suppliers, thereby propagating the requirements to our sub-tier suppliers.	Supply chain environmental impact
● Use of substances of concern in products	Managing use of materials and substances of concern, and using alternative materials that reduce the risk of human health and environmental impacts, while meeting performance and cost criteria.	Materials Products and Services	Supply chain Products and solutions	Materials
● Waste and hazardous materials in supply chain	Responsibly managing and disposing of hazardous and nonhazardous waste within HP's supply chain.	Effluents and Waste	Supply chain (first-tier suppliers)	Supply chain environmental impact
● Water in supply chain	Conserving water in HP's supply chain.	Water	Supply chain (first-tier suppliers)	Supply chain environmental impact
Medium importance to sustainable development, medium importance to HP's business success				
● Board structure and independence	Ensuring HP board diversity, independent oversight, and sustainability governance.	No GRI-specific Aspects	HP operations	Sustainability strategy Corporate ethics Governance HP 2017 Proxy Statement
● Circular economy	Developing business models and design criteria that support easy product reuse, disaggregation, and disassembly, to enable product and component reuse at end of service and to avoid waste.	Materials Products and Services	Supply chain HP operations Products and solutions	Circular economy Products and solutions Product repair, reuse, and recycling
● Environmental impact of operations	Addressing the environmental impacts of HP's operations, such as GHG emissions, energy use, nonhazardous and hazardous waste generation, and water consumption.	Energy Emissions Effluents and Waste Water	HP operations	Operations
● Intellectual property protection	Ensuring appropriate protection of HP's intellectual property rights.	No GRI-specific Aspects	Supply chain HP operations Products and solutions	Government relations
● Packaging	Working to decrease the environmental impact of HP packaging by reducing material use, optimizing shipping densities, and utilizing recycled and recyclable materials.	Materials	Products and solutions	Packaging
● Product transportation	Managing and reducing fuel use and environmental impacts from product transportation and logistics.	Transport Emissions	Supply chain Products and solutions	Supply chain environmental impact
● Public policy engagement	Influencing public policy development through direct engagement and through multi-stakeholder associations or initiatives.	Public Policy	HP operations	Government relations
● Responsible marketing	Working to ensure that marketing and communication of products and services is honest, transparent, and fair.	Marketing Communications	HP operations Products and solutions	GRI index

Global Reporting Initiative index

We considered the Global Reporting Initiative (GRI) G4 Sustainability Reporting Guidelines when preparing this report. HP self-declares this report to the Core In Accordance level.

GRI guideline	Disclosure title	Location	Assurance scope
Strategy and Analysis			
G4-1	Statement from the most senior decision maker of the organization	Letter from President and CEO Dion Weisler	
Organizational Profile			
G4-3	Name of the organization	HP overview	
G4-4	Primary brands, products, and services	HP overview , HP 2016 10-K	
G4-5	Location of the organization's headquarters	HP overview	
G4-6	Number of countries where organization operates, names of countries where organization has significant operations or that are specifically relevant to this report	HP 2016 10-K , map of HP supplier sites	
G4-7	Nature of ownership and legal form	HP overview	
G4-8	Markets served	HP overview , HP 2016 10-K	
G4-9	Scale of the organization	HP overview , Operations , HP 2016 10-K	
G4-10	Employee demographics	Diversity and inclusion , Society: Data A portion of the organization's work is performed by individuals other than HP employees or other workers supervised by HP, including workers employed or supervised by contractors.	
G4-11	Percentage of total employees covered by collective bargaining agreements	HP follows its Sustainability Policy (which includes information related to human rights) and its Standards of Business Conduct . The percentage of employees covered by collective bargaining agreements is managed at a local level. HP considers this percentage on a consolidated level not relevant.	
G4-12	Description of organization's supply chain	Supply chain responsibility , Supply chain responsibility: Our approach	
G4-13	Significant changes during the reporting period regarding the organization's size, structure, ownership, or its supply chain	HP overview , Supply chain responsibility , HP 2016 10-K	
G4-14	Whether and how the precautionary approach or principle is addressed by the organization	Materials	
G4-15	Circular economy, Our footprint, Externally developed economic, environmental, and social charters, principles, or other initiatives to which the organization subscribes or which it endorses	Circular economy , Our footprint , Supply chain environmental impact , Operations , Products and solutions , Supply chain responsibility , Supply chain responsibility: Our approach , Privacy , Human rights , Government relations , United Nations Global Compact index , United Nations Sustainable Development Goals , GRI index	
G4-16	List of memberships of associations and national or international advocacy organizations in which the organization is involved	Affiliations and memberships	
Identified Material Aspects and Boundaries			
G4-17	Entities included in the organization's consolidated financial statements or equivalent documents	HP 2016 10-K Differences in entities covered in different parts of the report are noted in those sections.	
G4-18	Process for defining report content and Aspect boundaries	Materiality	
G4-19	Identified material Aspects	Materiality	
G4-20	For each material Aspect, report the Aspect Boundary within the organization	Materiality	
G4-21	For each material Aspect, report the Aspect Boundary outside the organization	Materiality	
G4-22	Effect of any restatements of information provided in previous reports	Included in relevant sections as appropriate.	



GRI guideline	Disclosure title	Location	Assurance scope
G4-23	Significant changes from previous reporting periods in Scope and Aspect Boundaries	The HP 2015 Sustainability Report included performance data from Hewlett-Packard Company through FY2015, unless stated otherwise. This report includes performance data from HP Inc. through FY2016, unless stated otherwise. In some cases, data associated with the business units that are now a part of HP Inc. is included for years prior to 2016. Aspect Boundaries are similar to those disclosed in the 2015 report.	
Stakeholder Engagement			
G4-24	Stakeholder groups engaged by the organization	Stakeholder engagement	
G4-25	Basis for identification and selection of stakeholders with whom to engage	Stakeholder engagement	
G4-26	Approach to stakeholder engagement	Stakeholder engagement The frequency of stakeholder engagement varies by type of engagement and by stakeholder group, as described throughout this report.	
G4-27	Key topics and concerns raised through stakeholder engagement, and organization's response	Stakeholder engagement	
Report Profile			
G4-28	Reporting period	About this report	
G4-29	Date of most recent previous report	June 2016	
G4-30	Reporting cycle	Annual	
G4-31	Contact point for questions regarding report	About this report	
G4-32	GRI index	GRI index	
G4-33	Policy and current practice with regard to seeking external assurance for the report	External verification	
Governance			
G4-34	Governance structure, including committees of highest governing body	Sustainability governance, Governance	
G4-37	Processes for consultation between stakeholders and board on economic, environmental, and social topics	Sustainability governance	
G4-38	Composition of the highest governance body and its committees	HP board of directors, HP board committee composition	
G4-39	Whether chair of the highest governance body is also an executive officer	Governance	
G4-40	Nomination and selection process for the highest governance body and its committees	Corporate governance guidelines	
G4-41	Processes for the highest governance body to ensure that conflicts of interest are avoided and managed	Corporate governance guidelines	
G4-45	Highest governance body's role in the identification and management of economic, environmental, and social impacts, risks, and opportunities	Sustainability governance	
G4-47	Frequency of the highest governance body's review of economic, environmental, and social impacts, risks, and opportunities	Sustainability governance	
G4-49	Process for communicating critical concerns to the highest governance body	Contacting the board	
G4-51	Remuneration policies for the highest governance body and senior executives and relation to economic, environmental, and social objectives	HP 2016 10-K	
Ethics and Integrity			
G4-56	Organization's values, principles, standards, and norms of behavior such as codes of conduct and codes of ethics	Supply chain responsibility, Employees, Corporate ethics, Human rights, Policies and standards	

GRI guideline	Disclosure title	Location	Assurance scope
G4-57	Internal and external mechanisms for seeking advice on ethical and lawful behavior	Corporate ethics	
G4-58	Internal and external mechanisms for reporting concerns about unethical or unlawful behavior	Corporate ethics	
Specific Standard Disclosures			
Category: Economic			
Aspect: Economic Performance*			
G4-DMA	Generic Disclosures on Management Approach	HP 2016 10-K	
G4-EC1	Direct economic value generated and distributed	Supplier diversity , Communities , HP 2016 10-K	
G4-EC2	Financial implications and other risks and opportunities for the organization's activities due to climate change	HP's most recent CDP submission	
G4-EC3	Coverage of the organization's defined benefit plan obligations	HP 2016 10-K	
Material Aspect: Indirect Economic Impacts			
G4-DMA	Generic Disclosures on Management Approach	Supply chain environmental impact , Products and solutions , Supply chain responsibility , Communities	
G4-EC8	Significant indirect economic impacts, including the extent of impacts	Supply chain environmental impact , Products and solutions , Supply chain responsibility , Communities	
Aspect: Procurement Practices*			
G4-DMA	Generic Disclosures on Management Approach	Supplier diversity	
G4-EC9	Proportion of spending on local suppliers at significant locations of operation	Supplier diversity	
Category: Environmental			
Material Aspect: Materials			
G4-DMA	Generic Disclosures on Management Approach	Materials	
G4-EN1	Materials used by weight or volume	Materials	
G4-EN2	Percentage of materials used that are recycled input materials	Materials	
Material Aspect: Energy			
G4-DMA	Generic Disclosures on Management Approach	EHS management and compliance , Operations: Energy efficiency , Renewable energy , Products and solutions: Energy efficiency	
G4-EN3	Energy consumption within the organization	Operations: Energy efficiency , Renewable energy ,	See EY's Independent accountants' review report on page 130
G4-EN4	Energy consumption outside of the organization	Supply chain environmental impact: Greenhouse gas emissions , Products and solutions: Energy efficiency	
G4-EN5	Energy intensity	Operations: Energy efficiency , Environment: Data	
G4-EN6	Reduction of energy consumption	Operations: Energy efficiency	
G4-EN7	Reductions in energy requirements of products and services	Products and solutions	
Material Aspect: Water			
G4-DMA	Generic Disclosures on Management Approach	Our footprint , Supply chain environmental impact: Water , EHS management and compliance , Operations: Water	
G4-EN8	Total water withdrawal by source	Supply chain environmental impact: Water , Operations: Water , Environment: Data	See EY's Independent accountants' review report on page 130
G4-EN10	Percentage and total volume of water recycled and reused	Operations: Water	
Aspect: Biodiversity*			
G4-DMA	Generic Disclosures on Management Approach	Paper	
G4-EN12	Description of significant impacts of activities, products, and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas	Paper	

GRI guideline	Disclosure title	Location	Assurance scope
Material Aspect: Emissions			
G4-DMA	Generic Disclosures on Management Approach	Our footprint, EHS management and compliance, Operations: Greenhouse gas emissions, HP carbon accounting manual	
G4-EN15	Direct greenhouse gas (GHG) emissions (Scope 1)	Operations: Greenhouse gas emissions, Environment: Data, HP carbon accounting manual, CDP Climate Change submission	See EY's Independent accountants' review report on page 130
G4-EN16	Energy indirect GHG emissions (Scope 2)	Operations: Greenhouse gas emissions, Environment: Data, HP carbon accounting manual, CDP Climate Change submission	See EY's Independent accountants' review report on page 130
G4-EN17	Other indirect GHG emissions (Scope 3)	Our footprint, Environment: Data, HP carbon accounting manual, CDP Climate Change submission	See EY's Independent accountants' review report on page 130
G4-EN18	GHG emissions intensity	Operations: Greenhouse gas emissions, Environment: Data	
G4-EN19	Reduction of GHG emissions	Operations: Energy efficiency, CDP Climate Change submission	
G4-EN20	Emissions of ozone-depleting substances (ODS)	Environment: Data	
Material Aspect: Effluents and Waste			
G4-DMA	Generic Disclosures on Management Approach	EHS management and compliance, Waste and recycling	
G4-EN23	Total weight of waste by type and disposal method	Waste	
G4-EN24	Total number and volume of significant spills	We apply the risk-prevention and management procedures of our EHS management system to help prevent unplanned releases at our facilities. In 2016, we experienced no significant unplanned releases.	
Material Aspect: Products and Services			
G4-DMA	Generic Disclosures on Management Approach	Circular economy	
G4-EN27	Extent of impact mitigation of environmental impacts of products and services	Our footprint, Products and solutions, HP carbon accounting manual	
G4-EN28	Percentage of products sold and their packaging materials that are reclaimed by category	Product repair, reuse, and recycling	
Material Aspect: Transport			
G4-DMA	Generic Disclosures on Management Approach	Business travel, commuting, and auto fleet, Product transportation	
G4-EN30	Significant environmental impacts of transporting products and other goods and materials for the organization's operations, and transporting members of the workforce	Business travel, commuting, and auto fleet, Product transportation	
Material Aspect: Supplier Environmental Assessment			
G4-DMA	Generic Disclosures on Management Approach	Supply chain responsibility: Our approach	
G4-EN32	Percentage of new suppliers that were screened using environmental criteria	Supply chain responsibility: Our approach	
Category: Social			
Subcategory: Labor Practices and Decent Work			
Aspect: Employment*			
G4-DMA	Generic Disclosures on Management Approach	Compensation and benefits	
G4-LA2	Benefits provided to full-time employees that are not provided to temporary or part-time employees, by significant locations of operation	Compensation and benefits	
Aspect: Occupational Health and Safety*			
G4-DMA	Generic Disclosures on Management Approach	Health and safety	
G4-LA6	Type of injury and rates of injury, occupational diseases, lost days, and absenteeism, and total number of work-related fatalities, by region and by gender	Health and safety	
Material Aspect: Training and Education			
G4-DMA	Generic Disclosures on Management Approach	Talent development	
G4-LA9	Average hours of training per year per employee by gender, and by employee category	Talent development	

GRI guideline	Disclosure title	Location	Assurance scope
G4-LA10	Programs for skills management and lifelong learning that support the continued employability of employees and assist them in managing career endings	Talent development	
G4-LA11	Percentage of employees receiving regular performance and career development reviews, by gender and by employee category	Talent development	
Material Aspect: Diversity and Equal Opportunity			
G4-DMA	Generic Disclosures on Management Approach	Diversity and inclusion	
G4-LA12	Composition of governance bodies and breakdown of employees per employee category according to gender, age group, minority group membership, and other indicators of diversity	Diversity and inclusion, HP board of directors	
Material Aspect: Supplier Assessment for Labor Practices			
G4-DMA	Generic Disclosures on Management Approach	Supply chain responsibility: Our approach	
G4-LA14	Percentage of new suppliers that were screened using labor practices criteria	Supply chain responsibility: Our approach	
Subcategory: Human Rights			
Material Aspect: Nondiscrimination			
G4-DMA	Generic Disclosures on Management Approach	Supply chain responsibility: Our approach	
G4-HR3	Total number of incidents of discrimination and corrective actions taken	Society: Data , HP discloses the rates of nonconformance in supplier sites audited, but not the absolute numbers. Presenting this information in this manner provides additional context for the reader.	
Material Aspect: Freedom of Association and Collective Bargaining			
G4-DMA	Generic Disclosures on Management Approach	Supply chain responsibility: Our approach	
G4-HR4	Operations and suppliers identified in which the right to exercise freedom of association and collective bargaining may be violated or at significant risk, and measures taken to support these rights	Supply chain responsibility, Society: Data, Capability building	
Material Aspect: Child Labor			
G4-DMA	Generic Disclosures on Management Approach	Supply chain responsibility: Our approach	
G4-HR5	Operations and suppliers identified as having significant risk for incidents of child labor, and measures taken to contribute to the effective abolition of child labor	Supply chain responsibility, Society: Data, Capability building	
Material Aspect: Forced or Compulsory Labor			
G4-DMA	Generic Disclosures on Management Approach	Supply chain responsibility: Our approach	
G4-HR6	Operations and suppliers identified as having significant risk for incidents of forced or compulsory labor, and measures to contribute to the elimination of all forms of forced or compulsory labor	Supply chain responsibility, Society: Data, Capability building	
Material Aspect: Supplier Human Rights Assessment			
G4-DMA	Generic Disclosures on Management Approach	Supply chain responsibility: Our approach	
G4-HR10	Percentage of new suppliers that were screened using human rights criteria	Supply chain responsibility: Our approach	
Subcategory: Society			
Material Aspect: Anti-corruption			
G4-DMA	Generic Disclosures on Management Approach	Corporate ethics	
G4-SO3	Total number and percentage of operations assessed for risks related to corruption and the significant risks identified	Anti-corruption	
G4-SO4	Communication and training on anti-corruption policies and procedures	Corporate ethics, Anti-corruption	

GRI guideline	Disclosure title	Location	Assurance scope
Material Aspect: Public Policy			
G4-DMA	Generic Disclosures on Management Approach	Government relations	
G4-S06	Total value of political contributions by country and recipient/beneficiary	Government relations	
Material Aspect: Anti-competitive Behavior			
G4-DMA	Generic Disclosures on Management Approach	HP 2016 10-K (Note 15: Litigation and Contingencies; this information is as of the end of FY16)	
G4-S07	Total number of legal actions for anti-competitive behavior, anti-trust, and monopoly practices and their outcomes	HP 2016 10-K (Note 15: Litigation and Contingencies; this information is as of the end of FY16)	
Material Aspect: Compliance			
G4-DMA	Generic Disclosures on Management Approach	HP 2016 10-K (Note 15: Litigation and Contingencies; this information is as of the end of FY16)	
G4-S08	Monetary value of significant fines and total number of nonmonetary sanctions for noncompliance with laws and regulations	HP 2016 10-K (Note 15: Litigation and Contingencies; this information is as of the end of FY16)	
Material Aspect: Supplier Assessment for Impacts on Society			
G4-DMA	Generic Disclosures on Management Approach	Supply chain responsibility: Our approach	
G4-S09	Percentage of new suppliers that were screened using criteria for impacts on society	Supply chain responsibility: Our approach	
Subcategory: Product Responsibility			
Material Aspect: Customer Health and Safety			
G4-DMA	Generic Disclosures on Management Approach	Communicating product safety and environmental performance information, Materials	
G4-PR1	Percentage of significant product and service categories for which health and safety impacts are assessed for improvement	Communicating product safety and environmental performance information	
Material Aspect: Product and Service Labeling			
G4-DMA	Generic Disclosures on Management Approach	Communicating product safety and environmental performance information	
G4-PR3	Type of product and service information required by the organization's procedures for product and service information and labeling, and percentage of significant product and service categories subject to such information requirements	Communicating product safety and environmental performance information	
Material Aspect: Marketing Communications			
G4-DMA	Generic Disclosures on Management Approach	<p>HP is committed to responsible marketing and providing consumers and businesses accurate, relevant information. Our Standards of Business Conduct and corporate guidelines set expectations regarding the company's advertising practices. These resources require that advertisements and marketing collateral be fair, factual, and complete. HP requires that advertising claims must be formally substantiated with current factual data before publishing. HP sells its products in compliance with laws in the jurisdictions in which it does business.</p> <p>Training is available for employees in relevant parts of our business as well as for agencies that act on HP's behalf, including on aspects of responsible marketing such as proper claims, substantiation, necessary advertising disclosures, and endorsement of HP products by third parties.</p>	
G4-PR7	Total number of incidents of noncompliance with regulations and voluntary codes concerning marketing communications, including advertising, promotion, and sponsorship, by type of outcomes	<p>HP does not consider this metric to be highly applicable to the information technology industry, given the lack of strict regulations and voluntary industry codes in this area compared to many other industries. Further, the information is not currently available, and HP believes that this information will not be feasible to provide in the foreseeable future.</p>	
Material Aspect: Customer Privacy			
G4-DMA	Generic Disclosures on Management Approach	Privacy	
G4-PR8	Total number of substantiated complaints regarding breaches of customer privacy and losses of customer data	Privacy	

* Although this GRI G4 Aspect was not determined to be material in HP's materiality assessment, we recognize that it is relevant to some stakeholders and we provide information about HP's programs and performance in this area.

Endnotes

Introduction

Executive summary

- ¹ In this report, “we”, “us”, “our”, “company”, “HP”, and “HP Inc.” refer to HP Inc.
- ² Taking into account the separation of Hewlett-Packard Company on November 1, 2015, calculation for all years relates to supply chain, operations, and products and solutions associated with the business units that are now a part of HP Inc.
- ³ Through December 2015 (the most recent year data is available). Taking into account the separation of Hewlett-Packard Company on November 1, 2015, calculation for all years uses HP revenue and spend associated with the business units that are now a part of HP Inc.
- ⁴ Compared with non-subscription purchase of the same HP Ink cartridges. Based on a 2017 life cycle assessment (LCA) performed by Four Elements Consulting and commissioned by HP. Analysis includes the CO₂ equivalent associated with customer trips to purchase ink cartridges at a retail store versus delivering directly to a customer’s house, and it includes recycling empty ink cartridges versus throwing them away. Data and assumptions drawn from six years of customer data in the United States. Reductions in materials consumption, carbon footprint, energy use, and water usage are average values.
- ⁵ As of January 2017.
- ⁶ As of June 2017.
- ⁷ Based on currently available, in-market PCs, as of August 1, 2016, having physically embedded, hardware-based privacy screen. Available on select HP EliteBooks only.

HP overview

- ¹ In this report, “we”, “us”, “our”, “company”, “HP” and “HP Inc.” refer to HP Inc.

Sustainability strategy

- ¹ Intensity is calculated as the portion of first-tier production and product transportation suppliers’ reported GHG emissions attributable to HP divided by HP’s annual revenue. This method normalizes performance based on business productivity. Intensity is reported as a three-year rolling average to decrease the impact of variance year over year and highlight longer-term trends. Production supplier GHG emissions include Scope 1 and Scope 2.
- ² This continues a goal from before the separation of Hewlett-Packard Company on November 1, 2015, extending the goal to 2025. Includes data from suppliers associated with HP Inc. and HP Inc. pre-separation business units.
- ³ HP product GHG emissions intensity measures GHG emissions during product lifetime use per unit for personal systems and per printed page for printers based on anticipated lifetime usage. These values are then weighted by contribution of personal systems and printing products to overall revenue in the current year. These emissions represent more than 99% of HP product units shipped each year, including notebooks, tablets, desktops, mobile computing devices, and workstations; and HP inkjet, LaserJet, DesignJet, Indigo, and Scitex printers, and scanners.
- ⁴ Packaging is the box that comes with the product and all paper (including packaging and materials) inside the box.

Environment

Circular economy

- ¹ Research indicates the circular economy can help close half the emissions gap between Paris Climate Accord country commitments and the 1.5°C pathway, by 2030.
- ² Based on internal testing, HP Jet Fusion 3D printing solution average printing time is up to 10 times faster than FDM and SLS printer solutions from \$100,000 USD to \$300,000 USD on market as of April 2016. Testing variables: Part Quantity: 1 full build chamber of parts from HP Jet Fusion 3D at 20% of packing density versus same number of parts on above-mentioned competitive devices; Part size: 30 g; Layer thickness: 0.1mm/0.004 inches. Fast cooling module available in 2017 with some models will further accelerate production time.
- ³ Based on internal testing and public data, HP Jet Fusion 3D average printing cost per part is half the cost of comparable FDM and SLS printer solutions from \$100,000 USD to \$300,000 USD on market as of April 2016. Cost analysis based on: standard solution configuration price, supplies price, and maintenance costs recommended by manufacturer. Cost criteria: printing 1-2 build chambers per day/5 days per week over 1 year of 30-gram parts at 10% packing density using the powder reusability ratio recommended by manufacturer.
- ⁴ Energy claim and packaging waste claim based on testing comparisons of major competitors in default modes by Buyers Lab Inc., May 2016. [Learn more](#).

Our footprint

- ¹ Taking into account the separation of Hewlett-Packard Company on November 1, 2015, calculation for all years relates to supply chain, operations, and products and solutions associated with the business units that are now a part of HP Inc.
- ² Intensity is calculated as the portion of first-tier production and product transportation suppliers’ reported GHG emissions attributable to HP divided by HP’s annual revenue. This method normalizes performance based on business productivity. Intensity is reported as a three-year rolling average to decrease the impact of variance year over year and highlight longer-term trends. Production supplier GHG emissions include Scope 1 and Scope 2. Taking into account the separation of Hewlett-Packard Company on November 1, 2015, calculation for all years uses HP revenue and spend associated with the business units that are now a part of HP Inc.

- 3 HP product GHG emissions intensity measures GHG emissions during product lifetime use per unit for personal systems and per printed page for printers based on anticipated usage. These values are then weighted by contribution of personal systems and printing products to overall revenue. These emissions represent more than 99% of HP product units shipped each year, including notebooks, tablets, desktops, thin clients, displays, mobile computing devices, and workstations; and HP inkjet, LaserJet, DesignJet, Indigo, and Scitex printers, PageWide presses and scanners. Through 2016, progress against this goal equaled a 19% decrease.
- 4 This continues a goal from before the separation of Hewlett-Packard Company on November 1, 2015, extending the goal to 2025. Includes data from suppliers associated with HP Inc. and HP Inc. pre-separation business units.
- 5 "Potable water" consumption includes municipal water and well water.

Supply chain environmental impact

- 1 HP uses the terms "production suppliers," "product transportation suppliers," and "nonproduction suppliers" throughout this report. "Production suppliers" provide materials and components for our product manufacturing and also assemble HP products, and are the primary focus of our SER audits, assessments, KPI program, SER Scorecard, and capability building initiatives. Learn more in [Supply chain responsibility](#). "Product transportation suppliers" provide services for the shipping and delivery of HP products. "Nonproduction suppliers" provide goods and services that do not go into the production of HP products (such as staffing, telecommunications, and travel). These suppliers are a significant focus of our [supplier diversity](#) efforts.
- 2 Through December 2015 (the most recent year data is available).
- 3 Intensity is calculated as the portion of first-tier production and product transportation suppliers' reported GHG emissions attributable to HP divided by HP's annual revenue. This method normalizes performance based on business productivity. Intensity is reported as a three-year rolling average to decrease the impact of variance year over year and highlight longer-term trends. Production supplier GHG emissions include Scope 1 and Scope 2.
- 4 This continues a goal from before the separation of Hewlett-Packard Company on November 1, 2015, extending the goal to 2025. Includes data from suppliers associated with HP Inc. and HP Inc. pre-separation business units.
- 5 Taking into account the separation of Hewlett-Packard Company on November 1, 2015, calculation for all years uses HP revenue and spend associated with the business units that are now a part of HP Inc.
- 6 In the name of this program, "Zero Waste" refers to zero waste to landfill.

Operations

- 1 This report includes Scope 1, 2, and 3 GHG emissions data from HP's operations, transportation fleet, and employee business travel, calculated according to the Greenhouse Gas Protocol of the World Business Council for Sustainable Development (WBCSD) and World Resources Institute (WRI). See the [HP 2016 carbon footprint](#) for more details and an overview of emissions across the value chain.
 - 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 transportation fleet.
 - Scope 2 emissions are primarily from purchased electricity used in HP's operational real estate.
 - Scope 3 emissions reported in this section result from employee business travel by commercial airline and rail and from commuting.

Data in this section for 2015 and 2016 uses the market-based method. In the data summary, we also include 2015 and 2016 data using the location-based method.
- 2 "Potable water" consumption includes municipal water and well water.

Products and solutions

- 1 Comparisons made: x3, desk dock, and lap dock to EliteDesk 800 G2 Desktop Mini 35W, UltraSlim Docking Station, EliteBook Folio G1, and iPhone 6s Plus; x3, desk dock, and lap dock to UltraSlim Docking Station, EliteBook 820 G3, and iPhone 6s Plus; x3 and lap dock to EliteBook 820 G3; x3 and desk dock to EliteDesk 800 G2 DM 35W. Displays not included in any comparisons, since they would presumably be the same in either scenario. Product weights compared do not include any external accessories.
- 2 Compared with non-subscription purchase of the same HP Ink cartridges. Based on a 2017 life cycle assessment (LCA) performed by Four Elements Consulting and commissioned by HP. Analysis includes the CO₂ equivalent associated with customer trips to purchase ink cartridges at a retail store versus delivering directly to a customer's house, and it includes recycling empty ink cartridges versus throwing them away. Data and assumptions drawn from six years of customer data in the United States. Reductions in materials consumption, carbon footprint, energy use, and water usage are average values.
- 3 Based on internal testing, HP Jet Fusion 3D printing solution average printing time is up to 10 times faster than FDM and SLS printer solutions from \$100,000 USD to \$300,000 USD on market as of April 2016. Testing variables: Part Quantity: 1 full build chamber of parts from HP Jet Fusion 3D at 20% of packing density versus same number of parts on above-mentioned competitive devices; Part size: 30 g; Layer thickness: 0.1mm/0.004 inches. Fast cooling module available in 2017 with some models will further accelerate production time.
- 4 Based on internal testing and public data, HP Jet Fusion 3D average printing cost per part is half the cost of comparable FDM and SLS printer solutions from \$100,000 USD to \$300,000 USD on market as of April 2016. Cost analysis based on: standard solution configuration price, supplies price, and maintenance costs recommended by manufacturer. Cost criteria: printing 1-2 build chambers per day/5 days per week over 1 year of 30-gram parts at 10% packing density using the powder reusability ratio recommended by manufacturer.
- 5 HP product GHG emissions intensity measures GHG emissions during product lifetime use per unit for personal systems and per printed page for printers based on anticipated lifetime usage. These values are then weighted by contribution of personal systems and printing products to overall revenue in the current year. These emissions represent more than 99% of HP product units shipped each year, including notebooks, tablets, desktops, mobile computing devices, and workstations; and HP inkjet, LaserJet, DesignJet, Indigo, and Scitex printers, and scanners.
- 6 Packaging is the box that comes with the product and all paper (including packaging and materials) inside the box.
- 7 Microfluidics is the ability to precisely place and manipulate fluids at a very small scale.
- 8 This number does not include commercial and industrial graphics printing solutions, packaging for those solutions, personal systems accessories sold separately, or documentation for any products.
- 9 This does not include external components, mainly cables and external power supplies.
- 10 The low-halogen standard = <900 ppm chlorine, <900 ppm bromine, <1,500 ppm chlorine + bromine in any homogeneous material in the products.

- ¹¹ Packaging is the box that comes with the product and all paper (including packaging and materials) inside the box.
- ¹² HP GSE Requirement. While HP's packaging is 100% recyclable, some materials may not be recycled in specific locations since recycling infrastructure varies by geography.
- ¹³ The average energy consumption of HP products was estimated annually between 2010 and 2016 using high-volume product lines representative of the overall shipped product volume. The high-volume personal systems product lines include notebook and desktop computers, tablets, AIOs, workstations, thin clients, and displays.
- ¹⁴ The average energy consumption (based on ENERGY STAR® program's Typical Electricity Consumption (TEC)) of HP products was estimated annually between 2010 and 2015 using high-volume product lines representative of the overall shipped product volume. The high-volume product lines include HP LaserJet.
- ¹⁵ The average energy consumption (based on sleep mode power) of newly introduced HP products was estimated annually between 2010 and 2015 using high-volume product lines representative of the overall shipped product volume. The high-volume product lines include HP inkjet printers. Excluding PageWide inkjet printers and large format printers.
- ¹⁶ HP product GHG emissions intensity measures GHG emissions during product lifetime use per unit for personal systems and per printed page for printers based on anticipated lifetime usage. These values are then weighted by contribution of personal systems and printing products to overall revenue in the current year. These emissions represent more than 99% of HP product units shipped each year, including notebooks, tablets, desktops, mobile computing devices, and workstations; and HP inkjet, LaserJet, DesignJet, Indigo, and Scitex printers, and scanners.
- ¹⁷ The average energy consumption of HP products was estimated annually between 2010 and 2016 using high-volume product lines representative of the overall shipped product volume. The high-volume personal systems product lines include notebook and desktop computers, tablets, AIOs, workstations, thin clients, and displays
- ¹⁸ Does not include all retail point-of-sale products and phablets.
- ¹⁹ Based on HP internal testing using ISO 14644-1:1999, Cleanrooms and associated controlled environments – Part 1: Classification of air cleanliness, International Organization for Standardization (ISO), 1999. (3) CLEAN ROOM EVALUATION for HP, HP PageWide Pro 477dw MFP.
- ²⁰ Energy claim and packaging waste claim based on testing comparisons of major competitors in default modes by Buyers Lab Inc., May 2016. [Learn more](#).
- ²¹ Based on internal life cycle assessment vs. HP LaserJet printers, August 2016.
- ²² As defined per IEEE 1680.2 criteria 4.8.2.2.
- ²³ The average energy consumption (based on sleep mode power) of newly introduced HP products was estimated annually between 2010 and 2015 using high-volume product lines representative of the overall shipped product volume. The high-volume product lines include HP inkjet printers. Excluding PageWide inkjet printers and large format printers.
- ²⁴ The average energy consumption (based on ENERGY STAR® program's Typical Electricity Consumption (TEC)) of HP products was estimated annually between 2010 and 2015 using high-volume product lines representative of the overall shipped product volume. The high-volume product lines include HP LaserJet.
- ²⁵ As defined per IEEE 1680.2 criteria 4.8.2.2.
- ²⁶ Using the ENERGY STAR® program's Typical Electricity Consumption (TEC) method, or as reported in energystar.gov as of July 2015. Actual results may vary. HP testing is based on using the default Sleep Timer setting for all products. Default Sleep Timer setting is 0 minutes for the HP LaserJet M506 series. Increasing the Sleep Timer setting longer than the default value can increase TEC. More information about test methodology can be found at: www8.hp.com/h20195/v2/GetDocument.aspx?docname=4AA6-1566ENW.
- ²⁷ The CO₂ reduction was based on a comparison between HP LaserJet Enterprise 506dn and the predecessor product (HP LaserJet Enterprise P3015). CO₂ reduction for cartridges is reported per 1,000 pages printed (Kg CO₂e/1,000 pages).
- ²⁸ Only when original HP printing supplies are used can we expect the highest level of IAQ of our printing systems.
- ²⁹ Based on plan usage, Internet connection to eligible HP printer, valid credit/debit card, email address, and delivery service in your geographic area.
- ³⁰ Based on monthly subscription cost using only all pages in plan vs. cost per page of most color inkjet printers < \$399USD. Share from IDC CYQ1 2016. Standard cartridge CPP from gap intelligence AiO Weekly (IJP Weekly 5/15/16).
- ³¹ Compared with non-subscription purchase of the same HP Ink cartridges. Based on a 2017 life cycle assessment (LCA) performed by Four Elements Consulting and commissioned by HP. Analysis includes the CO₂ equivalent associated with customer trips to purchase ink cartridges at a retail store versus delivering directly to a customer's house, and it includes recycling empty ink cartridges versus throwing them away. Data and assumptions drawn from six years of customer data in the United States. Reductions in materials consumption, carbon footprint, energy use, and water usage are average values.
- ³² Environmental impact comparison of the printing stage between CI Flexo, Rotogravure, and HP Indigo 20000 press at job size of ~3,000m² of a coffee pouch made in Europe.
- ³³ See [HP Indigo: Environmental Sustainability](#), page 5 for more detail.
- ³⁴ HP water-based pigment inks and the bonding agent for HP PageWide Web Presses are not classified as flammable or combustible liquids under the USDOT or international transportation regulations. These materials have been tested per U.S. Environmental Protection Agency Method 1020 and the flashpoint is greater than 110°C.
- ³⁵ Hazardous air pollutants (HAPs) may be present at extremely low levels (< 0.1%) according to EPA Method 311.
- ³⁶ Actual results may vary depending on operating conditions. Consult local authorities regarding volatile organic compound (VOC) regulations in your area.
- ³⁷ UL ECOLOGO® Certification to UL 2801 demonstrates that an ink meets a range of multi-attribute, life cycle-based criteria related to human health and environmental considerations (see ul.com/EL). UL GREENGUARD GOLD Certification to UL 2818 demonstrates that products are certified to UL's GREENGUARD standards for low chemical emissions into indoor air during product usage. For more information, visit ul.com/gg or greenguard.org. HP WallArt printed on HP PVC-free Wall Paper and other prints on HP PVC-free Wall Paper printed with HP Latex Inks meet AgBB criteria for health-related evaluation of VOC emissions of indoor building products (see umweltbundesamt.de/en/topics/health/commissions-working-groups/committee-for-health-related-evaluation-of-building).
- ³⁸ Compared to solvent inks. See [HP Latex Inks: Health and environmental advantages](#) for details.
- ³⁹ Based on internal testing, HP Jet Fusion 3D printing solution average printing time is up to 10 times faster than FDM and SLS printer solutions from \$100,000 USD to \$300,000 USD on market as of April 2016. Testing variables: Part Quantity: 1 full build chamber of parts from HP Jet Fusion 3D at 20% of packing density versus same number of parts on above-mentioned competitive devices; Part size: 30 g; Layer thickness: 0.1mm/0.004 inches. Fast cooling module available in 2017 with some models will further accelerate production time.
- ⁴⁰ Based on internal testing and public data, HP Jet Fusion 3D average printing cost per part is half the cost of comparable FDM and SLS printer solutions from \$100,000 USD to \$300,000 USD on market as of April 2016. Cost analysis based on: standard solution configuration price, supplies price, and maintenance costs recommended by manufacturer. Cost criteria: printing 1-2 build chambers per day/5 days per week over 1 year of 30-gram parts at 10% packing density using the powder reusability ratio recommended by manufacturer.

Society

Supply chain responsibility

- ¹ As of April 2017.
- ² HP uses the terms “production suppliers,” “product transportation suppliers,” and “nonproduction suppliers” throughout this report. “Production suppliers” provide materials and components for our product manufacturing and also assemble HP products, and are the primary focus of our SER audits, assessments, KPI program, SER Scorecard, and capability building initiatives. “Product transportation suppliers” provide services for the shipping and delivery of HP products. Learn more in [Supply chain environmental impact](#). “Nonproduction suppliers” provide goods and services that do not go into the production of HP products (such as staffing, telecommunications, and travel). These suppliers are a significant focus of our [supplier diversity](#) efforts.
- ³ As defined in the [HP Supplier Code of Conduct](#): Workweeks are not to exceed the maximum set by local law. Further, a workweek should not be more than 60 hours per week, including overtime, except in emergency or unusual situations. Workers shall be allowed at least one day off every seven days.
- ⁴ Suppliers are categorized as minority-owned or women-owned, not both. These categories include all sizes of businesses.

Employees

- ¹ As of October 31, 2016.
- ² As of June 2017.
- ³ Hourly rate based on type of volunteering: \$150/hour for board, service corp, pro bono, and skills based; \$23.07/hour for hands-on and undetermined, adjusted using World Bank data for purchasing power differences across countries.

Communities

- ¹ As of January 2017.
- ² Social investments include all grants made to nonprofit organizations from HP, plus the valuation of employee volunteer hours. Data excludes investments in some of the initiatives described in the Communities section, such as HP Reinvent the Classroom, HP Learning Studios, and HP National Education Technology Assessment. Data excludes contributions to the HP Foundation and employee donations but includes HP’s matching contributions and contributions from the HP Foundation to other organizations.
- ³ The HP Foundation is a nonprofit, 501(c)3 organization that funds philanthropic programs for underserved communities where we live and work by supporting technology-related learning, charitable giving, volunteering, and disaster relief.
- ⁴ As of January 2017.

Integrity

Privacy

- ¹ “World’s most secure printing” claim is based on HP review of 2016 published security features of competitive in-class printers. Only HP offers a combination of security features that can monitor to detect and automatically stop an attack then self-validate software integrity in a reboot. For a list of printers, visit: www.hp.com/go/PrintersThatProtect.
- ² “World’s most secure and manageable PC” claim is based on HP’s unique and comprehensive security capabilities at no additional cost and HP Manageability Integration Kit’s management of every aspect of a PC including hardware, BIOS, and software management using Microsoft System Center Configuration Manager among vendors with >1M unit annual sales as of November 2016 on HP Elite PCs with 7th Gen Intel® Core® Processors, Intel® integrated graphics, and Intel® WLAN.
- ³ Based on currently available, in-market PCs, as of August 1, 2016, having physically embedded, hardware-based privacy screen. Available on select HP EliteBooks only.

About this report

Independent accountants' review report

- ¹ All indicators are reported for the year ended 31 October, 2016 except as otherwise indicated for conflict minerals disclosure.
- ² Carbon Accounting Manual is available at <http://h20195.www2.hp.com/V2/GetDocument.aspx?docname=c05179524>.
- ³ Direct water consumption for HP operations.
- ⁴ Note that Sewage Treatment Plant (STP) water is not included within the scope of water consumption.
- ⁵ As noted in the disclosure, this indicator pertains to the calendar year 2016.